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Sediment Losses From
Small Agricultural Watersheds
in Hawaii (1972-77)

U.S. Department of Agriculture
Science and Education Administration
Agricultural Reviews and Manuals • ARM-W-17/September 1980

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and K.R. Cooley

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ABSTRACT

Soil loss by water erosion is detrimental to soil productivity and environmental quality. In Hawaii, and the humid Tropics in general, the magnitudes of soil loss are acknowledged to be drastically higher than in temperate regions. Data to confirm or refute the above generalization are scarce. Results from studies on two pineapple and four sugarcane fields in Hawaii showed soil losses to be below recommended annual tolerance limits recognized by the Soil Conservation Service (SCS), U.S. Department of Agriculture.

If these fields are as representative as they are thought to be, this would indicate that (1) present farming practices are adequate to control erosion, (2) only very large, rare events are responsible for the majority of the erosion, or (3) sediment sources in Hawaii are rarely agricultural in origin.

Analyses of storm characteristics showed that over 90 percent of the storms recorded at the six different locations were of the Type IA and I distribution as defined by SCS. These types of storms are characterized by low intensity rainfall and are not generally conducive to high erosion potential.

Observed erosion was highly correlated with crop cover and percentage of watershed area in field roads. Both pineapple and sugarcane provided considerable protection only a few months after planting. On watersheds with less than 5 percent of the area in roads, almost all erosion occurred during, or shortly after, harvest and field preparation. On fields with greater than 5 percent of the area in roads, erosion occurred during almost all significant storm events, and annual erosion rates approached tolerance limits when 20 percent of the field was in roads.

In some cases, field topography was important, and, although erosion was observed on the steeper areas, much of the sediment was deposited on lower flat portions of the field before reaching the delivery points at which sediment sampling equipment was installed.

KEYWORDS: Erosion, sediment, rainfall, runoff, Tropics, soils, pineapple, sugarcane.

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SEDIMENT LOSSES FROM SMALL AGRICULTURAL WATERSHEDS IN HAWAII (1972-77)¹

By S. A. El-Swaify and K. R. Cooley²

INTRODUCTION

Soil erosion by water and subsequent sediment transport are detrimental to soil productivity and environmental quality. In Hawaii, as in humid Tropics generally, despite the relatively low susceptibility of highly weathered soils to erosion, the magnitudes of soil loss are generally acknowledged to be far greater than in temperate regions (14).³ This has been attributed to a combination of climatic extremes, steepness of topography, and inadequate precautions during agricultural or urban development; however, data to confirm, or refute, such observations are scarce. Such data are essential for an accurate definition of the process of agricultural pollution, a generation process that does not lend itself to generalizations as it is usually site specific. Although transport mechanisms are generally assumed to be universal (and thus amenable to direct transfer of information between different locations), the generation mechanisms must be verified for individual sites before overall models for sediment and associated pollutant transport are assessed (2, 3).

This study was conducted on six, small, cropped watersheds located on representative residual and volcanic ash soils in Hawaii. Two of these watersheds, which are planted to sugarcane, are on the island of Hawaii. The other four, of which one is in sugarcane, two are in pineapple, and the fourth has been planted to both crops, are on the island of Oahu. Data collection, consisting of rainfall, runoff, sediment, and field conditions, started in early 1972 on all of the watersheds except one pineapple site. That site was instrumented later, and data collection started at the beginning of 1975.

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³Italic numbers in parentheses refer to Literature Cited, p. 17.

The objectives of the study were:

1. To determine the magnitudes of soil losses caused by natural erosive rainstorms under existing cultural practices associated with sugarcane and pineapple production.
2. To gain insight into the effects of rainfall erosivity, soil erodibility, land management, and crop cover on observed soil losses.

LITERATURE REVIEW

Surveys of water erosion problems in the Tropics in general were recently given in various documents (7, 15). Authors of these documents generally agreed that a clear lack of quantitative information existed regarding the role of rainfall erosivity, soil erodibility, topography, and of crop and land management practices on water-induced soil erosion in the Tropics. Lal (15) reported results of field studies on the Alfisols of western Africa during the early 1970's.

In Hawaii, quantitative studies of soil erosion and sediment pollution started only in recent years (7, 10, 13). These studies resulted in erodibility values for 10 major soil series representing Aridisols, Inceptisols, Oxisols, Ultisols, and Vertisols. Many of these soils were more susceptible to erosion by a given rainstorm when antecedent moisture contents were high than when low, a fact which was explained both by early runoff initiation times and unique structural characteristics (1, 11). Measured erodibility values ranged between zero and 0.60 ton/acre/EI⁴ unit, a range which covers values reported for soils from many other regions (4, 16, 21). These experimental erodibility values were used by the Soil Conservation Service (SCS) as a basis for adapting use of the Universal Soil Loss Equation in Hawaii (20). Other factors in the equation were estimated based mainly on experiences within the Eastern United States (24) where a tremendous amount of information was developed from both natural and controlled experiments.

Previously, a 20-month study on strip-mined plots of an Aluminous Humic Ferruginous Latosol (Gibbsihumox) soil on Kauai showed that bare plots incurred soil losses of 15.5 tons/acre, that surface-protected plots incurred considerably less losses, but that unprotected, compacted plots incurred a 20-fold increase in erosion (21). Other research efforts in the area of soil erosion in Hawaii have been recently reviewed elsewhere (7, 9, 13). These efforts indicate that soil loss patterns under natural rainfall and prevailing cultural practices have not been studied to the extent that erosion rates have been quantified under a wide range of conditions.

EXPERIMENTS

Layout and Characteristics of the Watersheds

A total of six watersheds, two on the island of Hawaii and four on the island of Oahu, all originally nonirrigated, were selected as sites for these

⁴EI = rainfall erosion index as defined by Wischmeier and Smith (25).

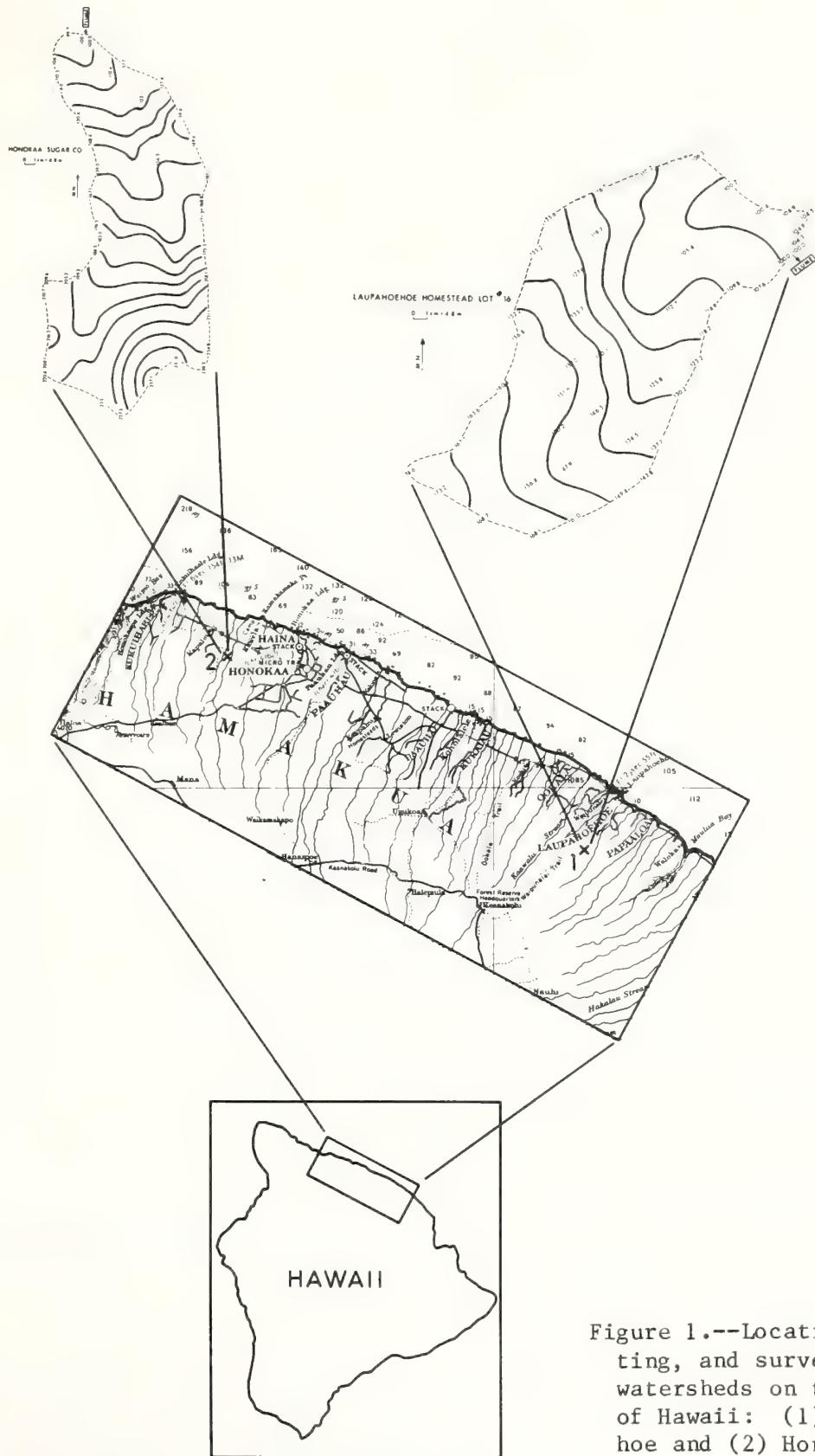


Figure 1.--Locations, setting, and survey maps for watersheds on the island of Hawaii: (1) Laupahoehoe and (2) Honokaa.

investigations. Figures 1 and 2 show the geographic locations of these sites on both islands as well as their survey maps.

Instrumentation of the selected sites was completed in 1972 except for the Kunia site which was selected and instrumented in 1974.

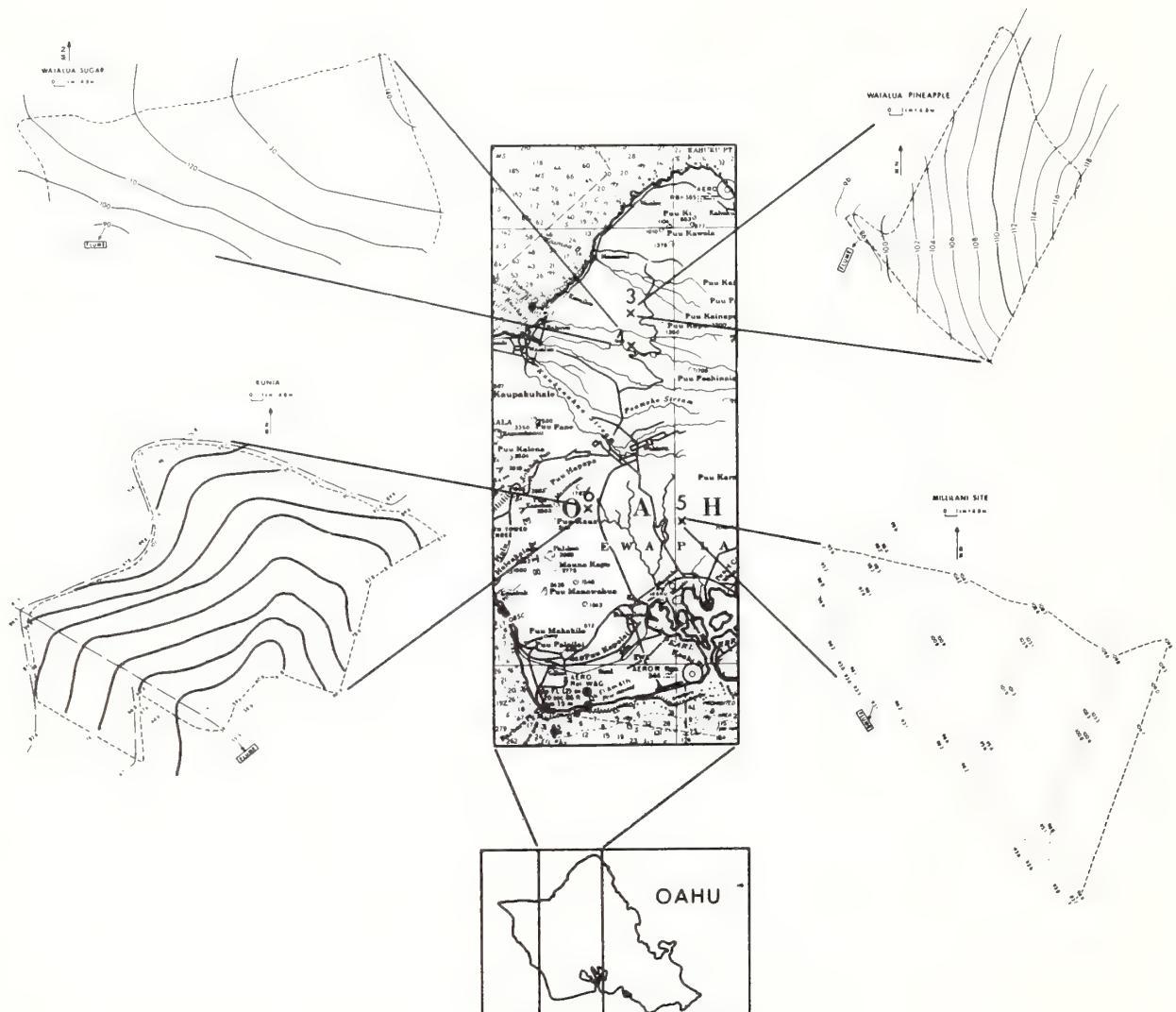


Figure 2.-- Locations, setting, and survey maps for watersheds on the island of Oahu: (3) Waialua A, (4) Waialua B, (5) Mililani, and (6) Kunia.

Laupahoehoe Watershed

This site is located at approximately $19^{\circ}58' N.$ and $155^{\circ}15' W.$ on sugar-cane field L-16 of the Laupahoehoe Homestead. It was planted in sugarcane in March 1967 and was harvested in March 1971, ratooned, and again harvested in February 1974. Sugarcane planting was completed in May 1974, and the first

crop was harvested in August 1976. The crop was again ratooned and reached full cover by the end of 1977. The catchment area, which is 100-percent cultivated, was reduced after the 1974 harvest due to the installation of a collection ditch below the upper third to divert surface runoff from that portion of the watershed. Topography of the watershed is characterized by a clamshell shape ending with the flat portion leading to the flume. This watershed received the most annual rainfall (table 1).⁵ The mean annual rainfall recorded during this study period was 150 inches.

Honokaa Watershed

This site is located at approximately 20°05' N. and 155°31' W. on field 11 of the Honokaa Sugar Company. Its recent history shows a sugarcane planting in May 1968, a harvesting in March 1971, ratooning, a second harvesting in May 1974, which was followed by a subsoiling operation, and replanting in June 1974. This crop was harvested in October 1976, and a ratoon was allowed to reach full cover by the end of 1977. As noted in figure 1, the catchment area, which is 100 percent cultivated, is somewhat elongated with alternating slopes of different gradients, the flattest being the portion directly leading to the flume. A mild channel formation divides the watershed along the central portion of the long dimension. In contrast to the long-term data presented in table 1, the mean annual rainfall recorded during this study period was 67 inches.

Waialua A Watershed

This site is located at approximately 21°36' N. and 158°02' W. on sugarcane field Kawaihoa 24B of the Waialua Sugar Company, which was in pineapple prior to 1962. Throughout its history, the site appeared to be plagued by erosion problems, particularly during periods of high vulnerability, because of the lack of effective vegetative cover. It was first planted in sugarcane in November 1962, replanted in December 1966, and allowed to ratoon in September 1970, August 1972, and November 1974. The field was again prepared in early 1975 with provisions for apparent crossing, rather than paralleling, of contour lines. The last ratoon was harvested in May 1977, and the field remained bare for the remainder of the year. The catchment surface forms a convex shape and is characterized by a relatively flat upper portion and a steep grade in the lower side adjacent to the road, which represents 5 percent of the total area and also represents the lower boundary. The mean annual rainfall during the study period was 43 inches.

Waialua B Watershed

This site is located at 21°34' N. and 158°02' W. on pineapple field No. 4707 of the Dole Pineapple Company. It was prepared and planted in pineapple in late 1963, in late 1966, and again in late 1970. That last crop was harvested in late 1973, and in early 1974 the land was instead prepared for sugarcane growing. The first sugarcane crop was planted in May 1974 and was harvested in April 1975, June 1976, and August 1977 for use as seed cuttings. The watershed originally consisted of 1.95 acres with 13 percent in roads. The area was cut

⁵All tables follow the text, beginning on p. 20.

by nearly one-half following conversion to sugarcane. Roads that formed two sides of the new watershed now occupy 15 percent of the area. Monitoring at this site was terminated in November 1977 due to continuing uncertainties concerning watershed boundaries.

Mililani Watershed

This site is located at 21°27' N. and 158°00' W. on pineapple field No. 4132 of the Dole Pineapple Company. It was prepared for pineapple in 1964 and in late 1968. After the harvest of mid-1972, weeds and grass were allowed to grow until the spring of 1973 when it was tilled and planted with Irish potatoes. This cropping, frequently sparse and intermixed with weeds, lasted until mid-1976 when the field was again prepared for pineapple culture. A full cover of pineapple was present in the watershed by the end of 1977. Provisions for irrigation using handset sprinklers exist now (1980). The catchment area, which is characterized by uniform slopes, decreased from the original 5.09 acres to 3.81 acres with the potato planting. Roads under potato planting constituted 4 percent of the area but increased to 15 percent with the 1976 pineapple planting. The mean annual rainfall during the study period was 35 inches.

Kunia Watershed

This site is located at 21°27' N. and 158°4' W. on a pineapple field belonging to the Del Monte Corporation and has been planted with that crop for nearly 50 years. The most recent crop cycle started by knockdown of the previous ratoon in November 1973, plowing in April 1974, planting in May 1974, harvesting the plant crop in December 1975, and one ratoon in December 1976. The field was plowed up in March 1977, and a new crop was planted in May 1977. The catchment area is the largest, most complex in drainage pattern, and has the highest percentage of roads (17 percent) of any of the watersheds in this study. In addition, a waterway, representing 3 percent of the total area, contributed to consistent sediment loss due to prolonged absence of grass cover. The watershed receives the lowest mean annual rainfall (table 1) with a record value of 25 inches during this study.

Soils of the Watersheds

As shown in table 1, the soils of the watersheds belong to the series Kaiwiki silty clay loam, and Kukaiau silty clay loam, Paaloa silty clay, Wahiawa silty clay, Kolekole silty clay loam. Detailed descriptions of field characteristics are given for representative profiles of each series in the State soil survey reports (12, 17). Table 2 shows some important characteristics of the top (plow) layers of the soils. Below is a brief summary of their field descriptions.

Kaiwiki

This soil is a member of the thixotropic, isohyperthermic family of Typic Hydrandept and, as such, is one of the wettest mineral soils in the State. It is developed in a series of layers of volcanic ash and, thus, has a profile

which is banded in appearance. Besides thixotropy--the property of becoming fluid when disturbed, as by shaking--a most important characteristic of this soil is the display of "irreversible" drying upon exposure or removal from the natural forest setting. Such drying results in the formation of unique aggregates or concretions, which, although they possess very strong stability as units, are easily detachable by rainfall and/or runoff water. As will be discussed later, however, these aggregates are subject to easy redeposition within the less steep areas of the landscape because of their sand-to-gravel size and mass. Much of this soil is now cleared for sugarcane production. In the natural setting, the soils are very well drained and have a low susceptibility to water erosion. Changes in erodibility due to removal of natural vegetation for cultivation have not been evaluated.

Kukaiau

This soil is a member of the thixotropic, isothermic family of Hydric Dystrandepts. It is developed from volcanic ash and is generally underlain by basalt. The surface soil is very acid and is characterized by weak, medium, subangular blocky structure. The subsurface is also acid and is characterized by weak, medium, and fine subangular blocky structure. The permeability is moderately rapid and the phenomenon of irreversible dehydration is also presumed to occur commonly in it. Based on experimental measurements (7, 8), the soil erodibility is rated as low.

Paaloa Series

This soil is an Ultisol, belonging to the clayey, oxidic, isothermic family of Humoxic Tropohumults. It is primarily used for sugarcane production with small areas in pineapple and, recently, in residential use. The surface (plow) layer is dark brown or dark reddish brown, characterized by strong fine and very fine, subangular blocky structure. The relatively thick subsoil is heavier in texture than the surface and has a moderate, fine and very fine, subangular blocky structure. This soil has a moderately rapid permeability and is estimated (7) to have a very low susceptibility to water erosion.

Wahiawa Series

This soil is an Oxisol belonging to the clayey, kaolinitic isohyperthermic family of Tropeptic Eutrostox. It is an important pineapple soil but is undergoing increasing urbanization. The soil is characterized by a dusky to very dusky red surface (plow) layer, which has generally granular structure and changes into subangular blocky structure in deeper layers. The soil has been shown to possess high aggregate stability (5) and favorable water transmission characteristics (11). According to the descriptive erodibility classes adopted for Hawaii's soils (7, 8), the soil has a low inherent susceptibility to water erosion.

Kolekole

This soil is a member of the fine, oxidic, isothermic family of Oxic Humitropepts and was developed in old gravelly alluvium mixed with volcanic ash. It is most commonly used for pineapple, sugarcane, and pasture. The dark reddish-brown surface soil generally has moderately rapid permeability with

weak, fine and very fine, granular structure. The subsoil is of moderate permeability with subangular and angular blocky structure. The soil is estimated to have a low susceptibility to water erosion.

Watershed Instrumentation and Sediment Collection

A detailed description of watershed instrumentation and sediment splitting and collection was given elsewhere (13). Originally, the data were collected on recorders, which digitized and punched separate paper tapes at 5-min intervals. Because of problems in matching the rainfall and runoff to a common time scale and rapid wear and, thus, reduced reliability of the punching mechanism at the 5-min recording rate, this equipment was replaced after 2-1/2 years of operation.

The new equipment (see fig. 3) collected data from both the rain gage and water stage simultaneously on the same chart of a Leopold-Stevens strip chart recorder (mounted in box C, fig. 3). Briefly, the rain gages (mounted on tower A, fig. 3) were of the tipping bucket type with an accuracy of ± 0.01 inch. For continuous monitoring of runoff rates, critical depth flumes (B) capable of handling runoff flow rates of 0.1 to 20 ft³/sec--representing flow depths of 0.1 to 1.5 feet--were connected to water stage recorders consisting of continuous drag pens with marking accuracy of ± 0.04 inch. Runoff and its total sediment load were subdivided twice, first by a tilted horizontal splitter (D) and then by rotary splitter (E). The final fraction (representing 1/3750 of the runoff volume) was collected in a container placed at the other end of a collection tube (F). Depending on the collected volume, sediment concentrations were determined on all or on some samples collected from runoff water.

Sediment Analysis

Total sediment content was determined on samples collected from all storms and particle size distribution on samples collected from storms where sample size was sufficient. For samples containing large sediment concentrations, greater than 0.12 lb/ft³, the sediment was flocculated by adding a few drops of 1N HCl, recovered in a preweighed container, dried at 110°C, and its amount determined gravimetrically. For samples with smaller sediment contents, the concentration was determined by turbidimetric techniques. Standard curves relating turbidity to sediment concentration were found to differ for the different soils of the watersheds and also for the different soil particle size fractions prevailing in the sediment. Figure 4 shows the standard curves obtained for whole soils and reveals that water turbidity for a given sediment concentration far exceeds that for nonoxidic (mainland) soils.

RESULTS AND DISCUSSION

Sediment Losses Under Erosive Storms

Table 3 shows the soil loss data in tons per acre collected for the six watersheds. Some qualifications, stated as footnotes with the table, need to be pointed out here before the data as discussed. When water-stage malfunction

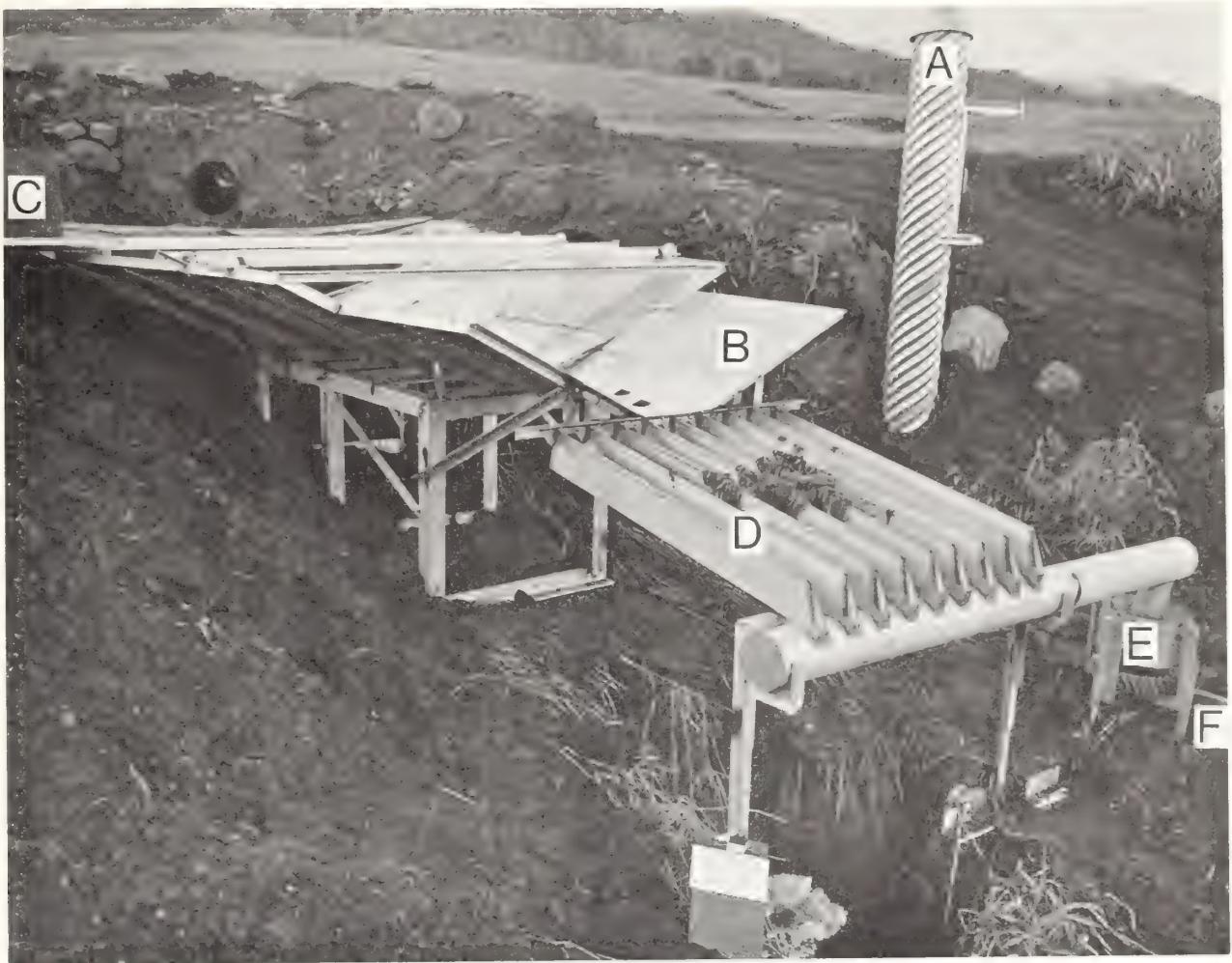


Figure 3.--Instrumentation for rainfall and runoff monitoring and for sediment splitting and collection: *A*, tower containing rain gage; *B*, critical depth flume; *C*, recorder; *D*, sediment splitter; *E*, second (rotation) splitter; and *F*, tube leading to collection container.

occurred, the runoff data used to calculate soil loss after a storm were obtained from the collected volume of split runoff in the storage barrel. When the volume of runoff exceeded that of the storage barrel, the assumption was made that any overflow contained only a small percentage of the sediment thus allowing the majority of it to remain in the barrel. The sediment concentration in collected samples was, therefore, adjusted by the ratio of barrel volume to actual runoff volume. Rainfall data reported, despite the recording rain gage malfunction, are totals obtained by measuring the cumulative volume of rainfall received.

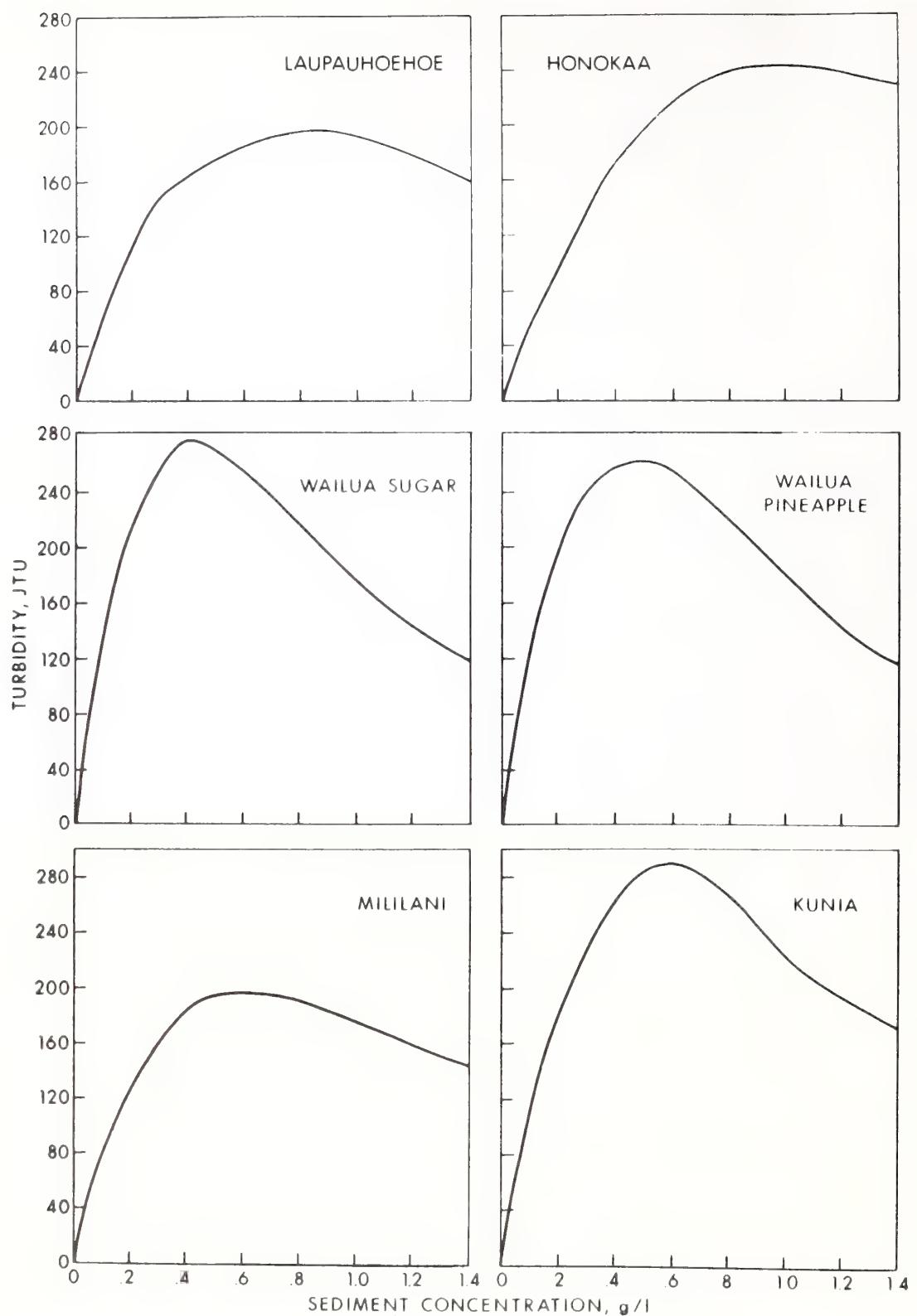


Figure 4.--Standard turbidity curves for watershed soils (composition fractions) ($1 \text{ g/L} = 0.0624 \text{ lb/ft}^3$).

Measured soil losses from the Laupahoehoe watershed (table 3-A) were scarce. Only on four occasions was significant sediment loss measured, although there were many more runoff-producing events than that (see next section on hydrologic characteristics). In all four cases, the field was bare following sugarcane harvest. This reflects the protective effects of even young sugarcane canopies on this soil as well as its low inherent susceptibility to erosion (erodibility value under 0.1); however, total soil loss measurements failed to reflect the appreciable soil movement that took place within the watershed boundary (10). As shown in figure 5, a significant amount of redeposition takes place on the portion of the watershed leading to the flume. Such deposition is enhanced by the flatness of this portion of the watershed (figs. 1 and 2) (resulting in deceleration of runoff) and the coarseness of the eroded sediment, which consists mostly of the "irreversibly dehydrated" aggregates characteristic of Typic Hydrandepts.

Soil losses produced even by the largest storms at the Honokaa watershed (table 3-B) approached 0.5 ton/acre on only one occasion when the field was bare following harvest. Otherwise, even on other occasions when the field was bare, soil losses were very small, indicating the moderately low soil erodibility (0.17) and the possible redeposition of some eroded sediments within the watershed. The relatively large size and dissected morphology of the watershed with a wide distribution of slope gradients (as low as 4 percent and as high as 47 percent) would enhance such redeposition. In addition, the Kukaiau soil, a Hydric Dystrandep, also displays irreversible aggregate formations although not to the extent characteristic of Typic Hydrandepts. As is indicated by the 1977 data (particularly day 101), the presence of sugarcane cover, even the young growth stages, allows only minute sediment losses to take place. Therefore, although the average annual soil loss from this watershed was the lowest observed in this study, a complete assessment of the sediment movement within its boundaries requires additional investigations.

As shown in table 3-C, many more erosive storms were recorded for the Waialua (A) watershed than for any other. Most of the significant soil losses were recorded when the field was bare (for example, day 331, 1974 and days 10 and 21, 1975) or when the sugarcane was at a young stage of growth (for example, day 35, 1975). A soil loss total of nearly 6.25 tons/acre was recorded on this watershed in 1975, the largest loss observed in any single year on any of the watersheds. Some large soil losses were noted with fully grown sugarcane (for example, days 335 and 351, 1975, and days 37 and 39, 1976). The effectiveness of sugarcane cover was diminished during 1975-76 by the sparse nature of the stand due to a severe drought that extended from February to November 1975.

The Waialua (B) watershed displayed the most erratic trends observed in this study, particularly with regard to excessive runoff. In several storms, runoff was shown to exceed rainfall, and, in many others, the runoff percent was unexpectedly high even for small amounts of rainfall. We suspect the upper boundary of the watershed was amenable to breakdown and subsequently allowed a larger land area than planned to contribute runoff. Runoff and sediment loss values in figure 4 D must, therefore, be considered as overestimates, at least for the large storms. For comparable storms, more severe soil losses occurred in this watershed during full pineapple canopies than during sugarcane. For example, five times as much soil loss was recorded for the period ending on day 72, 1974, with total rainfall of 4.5 inches and an EI value of 32, as for that



Figure 5.--View of the portion of Laupahoehoe watershed near the flume. Note deposition and accumulation in the flat area leading to the flume of sediment eroded from steeper slopes in the watershed.

ending on day 35, 1975, with a total rainfall of 7.5 inches and an EI value of 51 (tables 3 and 4). The period ending on day 335, 1975, did produce nearly equal soil loss to that of day 72, 1974, but with a recorded rainfall of 11.29 inches and (a partial) EI value of 88. These trends may be explained by the higher proportion of road characteristic of pineapple than of sugarcane fields. On this watershed, different growth stages for each crop did not reflect clear-cut differences in soil losses during the monitoring period.

The Mililani watershed also underwent a varying history of use. By matching tables 3 and 4, it is interesting to note that nearly all runoff inducing storms also induced soil loss from this watershed. Except for one storm combination during the first full year of records, 1974, soil losses would add to nearly 0.05 ton/acre well below the normally assumed tolerance level of 5. Alone, the storm combination of days 262, 263, and 264, 1974 (collection day 267), produced a loss of three times the tolerance level. Aside from storm

characteristics, that large soil loss was favored by a combination of a meager crop cover and a high antecedent soil moisture content from prior storms. These include a total of nearly 1.7 inches occurring within the preceding 10 days. The soil of this watershed was shown to be twice as susceptible to erosion during storms that fell on wet soils (due to earlier storm) than during storms occurring on dry soils (7, 8). This is explained both by an earlier initiation of runoff and by the weakening of soil aggregates upon increased water content.

Evidence for the first mechanism is noted here with the highest observed runoff coefficient of 51. The second mechanism was confirmed by controlled experiments and was discussed elsewhere (7). These mechanisms also explain the failure of another large storm combination documented for day 109 (collection date 110) of the same year to produce a large soil loss.

As shown in tables 3 and 4, the total rain of 4.1 inches for that combination was preceded by nearly 1.3 inches during the previous 48 hours; however, the soil loss was reduced due to substantial vegetative (weed) cover and by the lack of any rains for the nearly 30 preceding days. In general, while the Irish potatoes seemed to be having difficulty establishing growth, weeds grow rapidly, and erosion hazard was slight in their presence. The record for 1975 shows similar patterns, although the number of erosive storms was nearly half of those for 1974. Again, the recorded total, excepting the storm combination of days 327 to 331, was a tolerable 0.06 ton/acre. That storm combination alone produced 6.3 tons/acre, exceeding the conventional tolerance level.

Such a tolerance level (5 tons/acre) was established by considering soil loss impact on the productivities of temperate soils. It does not, therefore, allow for differences between different regions in the impact on soil productivity or the rates of soil formation by weathering processes. Neither does it consider expected differences in sediment delivery ratios for different areas or the different abilities of soils with different composition to induce water turbidity at the sediment destination.

The most erosive storm for 1975 was not as efficient as that of 1974 despite similar field conditions. This is explained by the lack of antecedent moisture reflected in a runoff of only 19 percent in 1975 as compared with 38 percent in 1974. The second largest storm combination for 1975, days 30 to 33, produced a similar runoff ratio but removed less sediment due to effective vegetative (weed) cover. The year 1977 was relatively noneventful as regards soil losses due to the contribution of grown pineapple and associated field shaping associated with its culture. Very likely, the observed steady sediment losses originated from the sizable proportion of roads on the watershed. Seldom was there runoff or soil loss observed for storms with less than 1 inch of rainfall.

The Kunia watershed was monitored only after late 1974. It was the only watershed where pineapple was exclusively grown during this study. During the 3-year monitoring period, many storms induced sediment losses exceeding 0.5 ton/acre (table 3-F). These coincided equally with the presence and absence of full crop cover. On two occasions (day 329, 1975, and day 181, 1977), the sediment loss exceeded half the "normal" allowable average annual soil loss. Note that the crop cover was nearly full on the first occasion. The large loss was likely due to a large EI value (table 4) and the significant contribution of antecedent soil water remaining from the previous day.

On the second occasion, the sparse crop cover was responsible for the large soil loss. The highest observed collective EI value on this watershed (EI₃₀ = 139 for 11 inches in three increments) was recorded prior to collection date 39; however, the soil loss caused by this rainfall (1.2 tons/acre) was not indicative of its erosivity. This is likely due to the relatively low antecedent soil water content and the separation of the rainfall into three distinct storm increments. As expected, higher soil loss was noted when the field was bare following harvest in early 1977. The storm ending on day 133 is particularly indicative of the soil's susceptibility to erosion as it lost 1.57 tons/acre due to only 1.47 inches and an EI value of only 10.

Even after the completion of planting in 1977, significant losses occurred with only moderate storms (for example, day 181 with a loss of 2.65 tons/acre under 1.95 inches of rain with an EI value of only 18). Such losses could be partially enhanced by runoff induced from the plastic mulching that covers a significant portion of the soil surface in the standard practice characteristic of pineapple culture and by the low infiltration rates of exposed soils. Inter-mulching spaces are generally compacted and devoid of shapes (for example, furrows) that provide surface water storage. Loose soil sits at the edge of the mulch and is susceptible to detachment with induced runoff. Basins can be observed in some pineapple fields (for example, Mililani) that trap runoff and reduce soil loss; however, this is not the usual practice. The high percentage of plantation roads in pineapple fields (17 percent at Kauia) provides a steady source of sediment even when pineapple is fully grown. This is noted clearly by the data collected from this watershed during 1975 and 1976.

Hydrological Characteristics of Rainfall Recorded During the Study Period

Some characteristics of the rainfall in the Hawaiian Islands have been reported (18, 26); however, some of the factors of interest to this study were not available. The following brief discussion is, therefore, aimed mainly at rainfall characteristics that appear to influence runoff and erosion.

An SCS engineering handbook (19) indicates that rainfall in Hawaii is characteristic of their Type I storm distribution, which, along with Type IA, is typical of maritime climates with wet winters and dry summers. An analysis of 31 storms occurring on the study watersheds, and covering a wide range of total storm rainfall and duration, did show from an energy standpoint, that 13 storms were Type I, 12 were Type IA, 5 were Type II, and the remaining storm was a Type IIIA (6). If this analysis was based on representative storms, it indicates that indeed Hawaiian rainfall is mainly of the I and IA types, which are characterized by relatively low intensity storms.

Analysis of the 32 station years of 5-min rainfall data collected on the six study watersheds, indicates that over 90 percent of the time when it is raining, the intensity is less than 0.24 inch/hour. Intensities of over 1 inch/hour were recorded less than 2 percent of the time it was raining. Although high intensity rainfall occurs less than 2 percent of the time, it can cause the most erosion damage. Maximum 5-min intensities recorded were: 1 at 7.2 inches/hour, 1 at 6 inches/hour, and 8 between 4 and 4.8 inches/hour (table 4).

Maximum intensities for a 30-min period were: 2 at 5.2 inches/hour, 2 at 3 inches/hour, and 17 over 2 inches/hour (table 4). Some watersheds had a greater number of intense storms than others, possibly due to topographic influences. For example, Honokaa watershed had three occurrences of high intensity storms while Laupahoehoe on the same island had 12. On Oahu, Waialua Pineapple and Mililani had seven and eight occurrences, respectively, while Kunia and Waialua Sugar had only one and zero, respectively.

Even though the intensities are quite low, the range of total storm magnitude is rather large. In many cases, the low intensity rainfall may continue for 24 hours and, in some cases, up to 72 hours. Total rainfall in several cases exceeded 10 inches, and the largest storm was over 22 inches. Here, as in other places, most of the erosion damage occurs during one of these large events, particularly if the storm contains periods of high intensity rainfall.

A method of determining the erosion potential or energy of a storm has been developed by Wischmeier and Smith (23) in which an EI value in foot-ton per acre times inches per hour is obtained by multiplying the total kinetic energy of the storm by its maximum 30-min intensity. Each storm's EI value is accumulated to obtain a yearly EI value or R factor. Isoerodent maps, lines of equal R factors, were assembled for the contiguous United States and Hawaii. To compare the values estimated for Hawaii with those obtained experimentally in this study, EI values for each storm on the watersheds were computed (table 4), and individual storm values were accumulated to obtain yearly values. The average of these annual values did not agree closely with those published by Wischmeier and Smith (24, 25). It is difficult to determine the reason for the discrepancy. The published maps are based on long-term averages but were based on limited (four) recording rain gage stations for which the average annual EI value correlated well with the product of 5-year, 6-hour, and 2-year, 1-hour storm probabilities. The values obtained in this study are true EI values but are based on only 6 years or less of data at the sites. Therefore, of more interest than the comparison between the two sets of data are the variability among the different locations and from year to year and the ratio of the largest individual storm EI value to the annual EI value.

The 6-year average annual EI value for Laupahoehoe was 727, and individual yearly values ranged from 423 to 1102. This was considerably higher than those determined for the other five watersheds where average annual values ranged from a low of 126 at Waialua Sugar to a high of 276 at nearby Waialua Pineapple. The range would have been even narrower for these five watersheds had it not been for the extreme storm (estimated to be a 50-year storm) at Waialua Pineapple that produced a storm EI value of 825 and contributed to an annual value of 1161. The ranges of annual values for these watersheds were: (1) Honokaa, 61 to 443; (2) Waialua Sugar, 30 to 267; (3) Waialua Pineapple, 26 to 1161, but only 26 to 185 if 1974 were omitted; (4) Mililani, 39 to 482; and (5) Kunia, 51 to 197.

To indicate the importance of the storm with the maximum EI value to the total EI value for the year, the ratio between the two was determined. On the four sugarcane watersheds, this ratio ranged from about 0.15 to 0.55 at each site, except for the large 1974 storm on Waialua Pineapple, when the ratio was 0.71. At the two drier pineapple sites, the range was smaller, and the ratio varied between about 0.30 and 0.55 at each site. Investigation of the storms

with maximum EI for the year indicated that these storms were not necessarily those with the highest intensities but may be those with large amounts of total rainfall.

Runoff curve numbers, as defined by SCS (19) and used to predict runoff from given amounts of rainfall, are shown in table 4 for all storms; however, they are only meaningful for those storms that produced runoff. Analysis of these curve numbers indicated that they were somewhat lower than published handbook values for sugarcane and considerably lower for pineapple. This indicates that these crops may be providing more protection against runoff, and also erosion, than anticipated. It could well be that except for very large storms all runoff comes from field roads. If this is the case (and the data indicate that it is, but the watersheds were not instrumented to provide proof), perhaps present conservation design procedures need modification. At present, roads and fields are apparently treated similarly. Then, to aggravate the situation, field roads are periodically graded, thus, essentially eliminating the runoff checks and collection ditches originally installed.

The results of this study indicate that the most intensive conservation measures should be applied to the roads and that present field practices may be adequate, especially after the pineapple is established. Maintenance of the conservation measures on the road areas would be possible at all times, whereas field measures cannot be easily repaired or changed once the crop has been planted until after final harvest and cultivation. Decreasing runoff from the road areas could significantly reduce erosion from pineapple fields since the soil on the road areas is generally very fine and unstable due to effects of vehicle traffic. In this condition, soil on roads is susceptible to erosion from even small runoff events. Some curve numbers for the very large storms are very low compared with those observed in other areas, indicating that the soil and storm conditions encountered in Hawaii are quite different.

Regression analysis was used for determining the relationship between runoff from the watersheds and rainfall characteristics, such as intensity, amount, energy, curve number, and antecedent moisture. Total rainfall was generally the most significant factor detected, with some measure of intensity next. Antecedent moisture based on rainfall within the previous 5 days seldom added significantly to the regression coefficient. In other words, the best indicator of the amount of runoff was the total amount of rainfall occurring during the storm. This is somewhat surprising in view of the fact that accelerated soil erosion in the Tropics is presumed to be, in large measure, due to the higher rainfall intensities associated with tropical storms (14).

SUMMARY AND CONCLUSIONS

Table 5 summarizes sediment records for all watersheds during this study period. Soil loss figures do not exceed the "normal" 5 tons/acre, although they come close in the Kunia watershed. Soil losses from the watersheds reflected the effects of hydrologic regime, soil erodibility, prevailing topography, and land use. Despite the bare-field conditions during all erosive storms on the Laupahoehoe watershed, the watershed produced the second least annual average soil loss and, when considering the annual erosion index, the least sediment

loss per EI unit. The internal redeposition of sediment and the low erodibility of this volcanic ash soil, partly accounted for these findings; however, this watershed includes virtually no plantation roads which provide a steady source of sediment in other watersheds. The Honokaa watershed's lack of sediment production is also due, to a large extent, to the virtual absence of plantation roads; however, it also received considerably less erosive rainfall (< one-fourth) than the Laupahoehoe watershed, only about 16 miles away along the same coast. For the Oahu watersheds, roads represent the major source of sediment due to the lack of vegetative cover throughout the year.

All four Oahu watersheds displayed soil loss patterns, which were also dependent on the timing of harvesting and tillage operations. The importance of the roads is demonstrated by the fact that the Kunia watershed with the highest proportion of roads (17 percent) contributed the most annual soil loss despite the fact that it receives the least total rainfall (25 inches) and, during the study period, the second least annual EI₃₀ units (tables 1 and 5).

Average annual erosion indices for the Eastern United States range from zero to 550 (25). Table 5 shows that all watersheds fall within this range except for the Laupahoehoe watershed, which exceeds the range by nearly 200 units. Much higher values, however, have been reported for some tropical regions (for example, 2000 for West Africa) than any of the values reported here (16).

Finally, as shown in table 5, despite the large differences observed between the watersheds, recorded soil losses from each remained below the so-called recommended annual tolerance limit (5 tons/acre) now recognized by SCS. Soil conservation precautions presently used by the plantation owners are quite adequate for meeting this limit, and road design and management offer the most promising means of reducing soil losses even more.

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Table 1.--Watershed characteristics

Watershed No., Location	Approximate elevation	Annual rainfall ¹			Prevaling ² slope			Parent material	Hydrologic group	Month	Year	Condition ⁴	Dominant soil			Highlights of record period		
		Feet	-----Inches-----	Percent	Max.	Med.	Series						Hydrologic group	Month	Year	Condition ⁴	Road area	Drainage area
1. Laupahoehoe, Hawaii	1,670	74	160	140	16	Kaiwaii	Volcanic ash	A	3	1971	Ratoon	2.05	0	2.05	0	2.05	0	
									2	1974	Harvest							
									5	1974	Replant	1.52	0					
									8	1976	Harvest	1.52	0					
2. Honokaa, Hawaii	1,615	48	116	78	17	Kukaiau	Volcanic ash	A	3	1971	--do--							
									5	1974	Harvest	5.15	0					
									6	1974	Replant	5.15	0					
									10	1976	Harvest	5.15	0					
3. Waialua A, Oahu	940	28	62	57	10	Paaloa	Basic alluvium and residuum	Basis	9	1970	Ratoon	5.15	0					
									8	1972	Harvest	5.97	5					
									8	1972	Ratoon	5.97	5					
									11	1974	Harvest	5.97	5					
4. Waialua B, Oahu	1,010	23	57	43	6	Wahiawa	Basic residuum and alluvium	Basis	3	1974	Bare field	5.97	5					
									5	1977	Planted-Pineapple	1.95	13					
									5-12	1977	Tillage	1.95	13					
									7	1970	Sugarcane (planted seed)	1.02	15					
									4	1975	Harvest	1.02	15					
									6	1976	--do--	1.02	15					
									8	1977	--do--	1.02	15					
5. Mililani Oahu	700	30	69	50	4	--do--	--do--	B	9	1968	Site abandoned	1.02	15					
									4	1973	Pineapple planting	5.09	4					
									6	1973	Potatoes planted	3.80	4					
									3	1974	Tillage	3.80	4					
									8	1974	Potatoes replanted	3.80	4					
									9	1975	Tillage	3.80	4					
									5	1976	Pineapple replanted	3.80	15					
6. Konia, Oahu	1,000	18	77	34	5	Kolekole	Gravelly alluvium and ash	C	5	1974	Pineapple planted	7.02	17					
									1	1976	Ratoon	7.02	17					
									3	1977	Tillage	7.02	17					
									5	1977	Replant	7.02	11					

Table 1.—Watershed characteristics--Continued

¹According to Taliaferro (18) and records for stations 830, 861, 894, 822, 130·1, and 215·3 for the 6 watersheds, respectively. These values reflect 12, 28, 13, 19, 7, and 38 complete year records at the respective locations.

²Slope gradient according to grid contour method (22).

³According to excerpts of the Engineering Field Manual supplied by R. Huff, State soil scientist, SCS, USDA, Honolulu, Hawaii. A brief explanation is given below for each classification:

GROUP A. Soils in this group have high infiltration rates when thoroughly wetted. This group consists of mineral soils that have a combination of depth, apparent texture, structure, aggregate stability, and porosity that allows a rapid rate of water transmission. Estimated rate of water transmission is 1 to 2 inches/hour.

GROUP B. Soils in this group have moderate infiltration rates when thoroughly wetted. This group consists mainly of mineral soils with halloysitic clay mineralogy and ashy soils that have a combination of depth, apparent texture, structure, aggregate stability, and porosity that allows a moderate rate of water transmission. Estimated rate of water transmission of 0.5 to 1.0 inch/hour.

GROUP C. Soils in this group have slow infiltration rates when thoroughly wetted. This group consists mainly of soils with a layer that impedes downward movement of water or a combination of clay minerals that have a moderate to high shrink-swell potential that allows a slow rate of water transmission. Estimated rate of water transmission is 0.2 to 0.5 inch/hour.

⁴Ratoon = beginning of the second crop cycle.

Table 2.--Important properties of watershed soils (A_p horizon)

Soil series	Field texture	Percentages of the following particle sizes (μm)			Aggregate stability parameters for the following aggregate sizes (mm) Composition								
		>50	50-100	2-50	<2	True texture value ¹	Erodibility class	Permeability class	>2	0.85-	0.43-	0.25-	0.11-
		Ton/acre/ EI	Ton/acre/ EI	Ton/acre/ EI	Ton/acre/ EI	Ton/acre/ EI	Rapid	Moderately rapid	Moderately rapid	2	0.85	0.43	GMD ³
Kaiwiki	Silty clay loam	12.4	4.2	32.8	54.8	Clay	0.07		36.5	35.5	11.2	5.6	3.3
Kukaiau	--do--	20.4	3.8	33.7	46.1	--do--	.17	Moderately rapid	45.2	43.2	5.8	2.0	.9
Paaloa	Silty clay	1.1	.54	14.4	84.5	--do--	.09	--do--	49.2	37.6	7.4	1.77	1.1
Wahiaawa	--do--	1.4	.58	13.7	84.9	--do--	.14	--do--	13.0	32.6	27.7	12.9	8.9
Wahiaawa (Mililani)	--do--	4.4	1.0	8.0	87.6	--do--	.14	--do--	61.4	25.9	7.0	2.4	1.8
Kolekole	Silty clay loam	3.9	1.4	31.0	65.1	--do--	.17	Moderate	43.1	23.3	12.1	6.5	5.9

¹ Mean weighted value as reported elsewhere (7) or estimated value based on similarity with known soils.² Mean weight diameter.³ Geometric mean diameter.1 $\mu\text{m} = 0.00003937$ inches.

1 mm = 0.03937 inches.

Table 3.--Sediment losses from runoff-producing storms
 [Figures in parentheses represent total runoff in inches]

Year	Julian collect- tion date			Storm incre- ments			Sediment			Field condition
	Rain	Runoff		Concen- tration	Total loss					
Number Inches Percent Lb/ft ³ Tons/acre										
A. Laupahoehoe Watershed										
1974	24	2	7.50	54	0.11	0.83				Bare.
	36	3	4.50	34	.44	11.19				Do.
	66	3	5.70	13	.003	¹ .004				Do.
	246	2	3.64	21	.47	.66				Do.
B. Honokaa Watershed										
1974	87	2	22.0	13	.033	.013				Complete cane cover.
1975	16	1	9.69	1.1	.052	.009				5-6 ft sugarcane.
1976	317	2	3.64	4.1	.17	.049				Bare field.
	325	2	2.97	19	.031	.031				Do.
	353	2	2.98	14	.59	.44				Do.
	366	1	1.73	5.2	.031	.004				1-2 ft sparse cane.
1977	62	1	2.22	5	.087	.018				2-4 ft sugarcane.
	83	4	4.81	³ .6	.77	³ .040				Do.
	101	4	13.02	3.5	.15	¹ .125				Do.
	125	1	2.06	8.7	.037	.013				4-6 ft sugarcane.
	196	3	.98	.1	1.23	¹ .004				5-7 ft sugarcane.
	225	2	4.64	1.1	.14	¹ .013				8-10 ft sugarcane.
	355	1	(2)	(.01)	.016	¹ .0004				9-12 ft sugarcane.
C. Waialua (A) Watershed										
1973	145	1	1.10	26	.036	¹ .018				8 ft sugarcane.
	331	-	(2)	(.10)	.025	1.004				Do.
	345	1	2.10	2.4	.05	1.004				Do.
1973/74	8	-	(2)	(.16)	.013	1.004				Do.
1974	22	-	(2)	(.04)	.105	1.009				Do.
	50	-	(2)	(.17)	.017	1.004				Do.
	72	-	(2)	(.22)	.036	1.013				Do.
	141	4	2.40	1.3	.08	.004				10 ft sugarcane.
	176	1	.80	1.3	.21	.004				Do.
	203	2	4.70	1.5	.027	.004				Do.
	260	1	.80	1.3	.048	.0009				Do.
	275	2	1.10	.9	.018	.0004				Do.
	331	4	6.20	11	.59	.70				Field harvested.

See footnotes at end of table.

Table 3.--Sediment losses from runoff-producing storms--Continued
 [Figures in parentheses represent total runoff in inches]

Year	Julian collection date	Storm incre- ments	Sediment				Field condition			
			Rain	Runoff	Concen- tration	Total loss				
Number Inches Percent Lb/ft ³ Tons/acre										
C. Waialua (A) Watershed--Continued										
1974/75	10	6	2.87	28	0.21	0.30	Bare field.			
1975	21	2	3.03	40	.38	.82	Do.			
	28	1	2	19	.18	.12	1-2 ft sparse cane.			
	35	4	8.19	47	.43	3.03	Do.			
	91	-	(2)	(.28)	.15	¹ .076	2-3 ft sparse cane.			
	98	1	1.33	13	.16	¹ .049	Do.			
	294	1	.97	6.1	.13	.031	6-8 ft sparse cane.			
	328	2	2.27	11	.17	.08	6-10 ft sparse cane.			
	335	3	9.79	26	.33	1.50	Do.			
	351	1	22.95	27	.31	.45	8-10 ft sparse cane.			
1976	34	1	1.46	12	.10	.031	10 ft sparse cane.			
	37	2	6.08	23	.32	.84	Do.			
	39	-	(2)	(1.21)	.58	¹ 1.28	Do.			
	48	2	.80	11	.15	.022	Do.			
	55	3	1.76	6.3	.10	.018	Do.			
	62	1	1.22	10	.26	.058	Do.			
	69	1	.75	6.7	.14	.013	Do.			
	83	3	1.43	7	.069	.013	Do.			
	90	1	.74	6.8	.29	.027	Do.			
	96	4	2.78	12	.33	.205	Do.			
	101	1	1.31	3.1	.71	.049	Do.			
	110	2	1.82	7.1	.08	.018	Do.			
	126	1	1.46	8.2	.019	.004	Do.			
	147	2	.81	2.5	.46	.018	Do.			
	154	1	.25	8	.11	.0004	Do.			
	206	1	.99	.4	.056	.0004	Do.			
	259	1	.55	.6	.22	.0013	Do.			
	280	1	.57	.9	.56	.004	Do.			
	287	1	.52	1.5	.044	.0004	Do.			
	335	1	.41	.7	.019	.0009	Do.			
1977	30	1	.43	2.3	.062	.0013	Do.			
	51	2	1.60	4.4	.003	.0004	Do.			
	60	-	23.41	.6	.031	.0013	Do.			
	68	2	.72	2.8	.019	.0009	Do.			
	75	1	1.10	1.9	.044	.0018	Do.			
	81	3	2.12	1.9	.056	.004	Do.			

See footnotes at end of table.

Table 3.--Sediment losses from runoff-producing storms--Continued
 [Figures in parentheses represent total runoff in inches]

Year	Julian collection date			Storm increments			Sediment			Field condition
	Rain	Runoff		Concen-	total					
	Number	Inches	Percent	Lb/ft ³	Tons/acre					
C. Waialua (A) Watershed--Continued										
1977	89	3	21.81	1.7	0.11	0.009	10 ft	sugarcane.		
	97	-	2 .79	.1	.13	1 .0002	Do.			
	103	4	.58	.5	.05	1 .0003	Do.			
	110	-	21.71	2.3	.069	.04	Do.			
	117	1	2 .32	3.1	.031	.004	Do.			
	131	3	21.55	1.3	.028	.0009	Do.			
	138	-	22.53	2.4	.097	.009	Do.			
	165	2	.23	.4	.23	1 .0004	Bare field.			
	181	1	.57	1.8	.32	.0058	Do.			
	188	3	.38	.1	.44	1 .0004	Do.			
	195	1	1.09	1	.53	.013	Do.			
	201	2	.36	.1	.37	1 .0003	1 ft sugarcane.			
	308	2	1.98	4.8	.01	.0018	Bare soil.			
	314	1	.07	4.3	.03	.0002	Do.			
	338	1	1.63	3.5	.66	.067	Do.			
	345	-	2 .75	4.8	.019	.0013	Do.			
	353	-	22.40	4.1	.018	.0031	Do.			
D. Waialua (B) Watershed										
1972	354	4	2.60	12	.087	.049	Complete pineapple cover.			
1973	187	2	1.70	4.7	.075	.009	Do.			
	331	2	.80	1.3	.31	.009	Do.			
	345	1	2	12	.094	.04	Do.			
1973/74	8	3	3.90	36	.073	.18	Do.			
1974	22	3	1.80	37	.13	.16	Do.			
	32	-	(²)	(1.78)	.31	1 .01	Do.			
	57	-	(²)	(.87)	.25	1 .40	Do.			
	72	2	4.50	(⁴)	.70	45.96	Do.			
	87	-	4.50	43	.032	1 .11	Harrowing field.			
	148	2	2	27	.43	.41	Planted to sugarcane.			
	203	1	4.30	19	.081	.12	2-3 ft sugarcane.			
	331	2	3.90	(⁴)	.11	1.23	4-5 ft sugarcane.			
1974/75	10	6	1.95	2.6	.046	1 .004	6-8 ft sugarcane.			
1975	35	3	7.52	(⁴)	.084	4 .96	Do.			

See footnotes at end of table.

Table 3.--Sediment losses from runoff-producing storms--Continued
 [Figures in parentheses represent total runoff in inches]

Year	Julian collection date			Sediment			Field condition	
	Storm date	incre- ments	Rain	Runoff	Concen- tration	Total loss		
Number Inches Percent Lb/ft ³ Tons/acre								
D. Waialua (B) Watershed--Continued								
1975	91	1	2.16	40	0.05	0.08	6-8 ft sugarcane.	
	328	2	1.98	42.26	.36	1.46	Do.	
	335	-	211.29	79	.33	5.33	8-10 ft sugarcane.	
	351	-	22.79	66	.14	.47	Do.	
1976	37	-	25.52	37	.13	.48	10 ft sugarcane.	
	38	-	22.97	47	.069	.17	Do.	
	39	-	22.28	32	.10	.13	Do.	
	46	-	2.57	25	.056	.013	Do.	
	62	-	21.76	20	.11	.07	Do.	
	77	1	.48	11	.037	.004	Do.	
	83	1	.53	1.9	.11	.002	Do.	
	96	3	1.64	35	.075	.076	Do.	
	126	1	1.26	5.6	.081	.009	Do.	
	287	1	.89	9	.05	.009	4 ft sugarcane.	
	335	1	.39	7.7	.47	.027	4-6 ft sugarcane.	
1977	60	1	.43	47	.89	.32	6-8 ft sugarcane.	
	68	2	2.48	48	.15	.06	Do.	
	81	3	1.49	34	.40	.36	Do.	
	89	-	21.87	58	.38	.75	Do.	
	97	-	(2)	(.93)	.31	.52	Do.	
	110	2	3.81	75	.37	1.95	8-10 ft sugarcane.	
	117	1	.33	33	.11	.02	Do.	
	131	2	.88	86	.04	.058	Do.	
	138	4	2.33	(4)	.88	7.58	Do.	
	165	1	.18	78	.047	.13	Do.	
	181	1	.94	96	.20	.33	Do.	
	308	1	.74	92	.044	.05	1-2 ft young sugarcane.	
E. Mililani Watershed								
1973	331	2	1.40	7.9	.012	.0027	Potatoes and 2-3 ft weeds.	
	345	2	1.70	3.5	.0012	.00013	Do.	
	361	1	.90	2.2	.0012	.0004	Do.	
1973/74	10	6	6	7.7	.0087	.007	4-5 ft weeds.	

See footnotes at end of table.

Table 3.--Sediment losses from runoff-producing storms--Continued
 [Figures in parentheses represent total runoff in inches]

Year	Julian collection date	Storm incre- ments	Rain	Runoff	Sediment			Field condition
					Concen- tration	Total loss	Lb/ft ³	
					<i>Number Inches</i>		<i>Percent</i>	<i>Lb/ft³</i>
					<i>Tons/acre</i>			
					E. Mililani Watershed			
1974	22	2	1.90	7.9	0.0062	10.0018		4-5 ft weeds.
	32	3	3.60	8.6	.03	.013		Do.
	50	3	1.20	1.7	.086	.003		Do.
	72	1	1.80	1.7	.011	.0004		Do.
	87	3	2.50	3.2	.0037	.0004		Do.
	110	2	4.10	2	.01	.0009		Do.
	161	1	2.30	1.7	.032	.0022		Harrowed & bare
	203	2	2	1	.015	.0004		Do.
	260	2	1.30	2.3	.175	.0094		Potatoes & weeds.
	267	3	6.90	51	3.33	54.20		Do.
	331	1	2.40	16	.057	.039		Do.
1974/75	8	3	1.22	4.9	.0094	.0009		3-4 ft weeds.
1975	15	4	2.93	27	.0069	.0098		Do.
	35	3	25.60	24	.027	.067		4-5 ft weeds.
	91	1	1.65	1.21	.0087	1.0004		Do.
	335	2	25.65	32	2.10	56.85		Bare field.
1976	37	1	2.66	6.4	.028	.0085		Do.
	38	1	2.50	46	.90	1.86		Do.
	39	1	2.24	14	.11	.067		Do.
	62	1	.59	5.1	.044	.0022		Do.
	96	1	.59	31	.072	.024		Do.
	268	(6)		(.06)	.031	1.0036		1 ft pineapple.
	324	(6)		(.04)	.012	1.0009		1-2 ft pineapple.
1977	24	(6)		(.04)	.037	1.0027		2 ft pineapple.
	30	(6)		(.002)	.18	1.0004		Do.
	51	(6)		(.23)	.006	1.0027		Do.
	60	(6)		(.01)	.16	1.0027		2-3 ft pineapple.
	68	(6)		(.02)	.037	.0013		Do.
	81	1	.52	3.9	.0094	.0004		Do.
	91	4	1.78	5.6	.075	.013		3 ft pineapple.
	110	2	2.34	27	.047	.0076		Do.
	117	2	2.57	8.2	.059	.023		Do.
	131	1	.92	4.4	.044	.0031		Do.
	138	4	2.22	5.9	.072	.017		3-4 ft pineapple.
	153	3	.65	.2	.65	1.0013		Do.
	181	1	.24	.8	.029	1.00009		Do.

See footnotes at end of table.

Table 3.--Sediment losses from runoff-producing storms--Continued
 [Figures in parentheses represent total runoff in inches]

Year	Julian collect- tion date	Storm incre- ments	Sediment				Field condition			
			Rain	Runoff	Concen- tration	Total loss				
Number Inches Percent Lb/ft ³ Tons/acre										
E. Mililani Watershed--Continued										
1977	308	2	.42	0.7	0.027	¹ 0.00018	3-4 ft pineapple.			
	338	1	1.67	6	.024	.004	Do.			
	345	2	.75	.4	.078	¹ 0.0004	Do.			
	353	1	.87	.7	.0087	¹ 0.00009	Do.			
F. Kunia Watershed										
1974	333	-	(²)	(.54)	1.35	1.32	1-2 ft pineapple.			
1975	10	-	(²)	(.18)	1.45	.47	2 ft pineapple.			
	15	3	3.68	13	.89	.74	Do.			
	35	3	5.88	³ 8.3	.90	³ .80	Do.			
	91	2	2.01	7.5	.041	.011	2-3 ft pineapple.			
	98	2	.55	7.3	.024	.0018	Do.			
	328	1	2.44	23	.17	.17	3 ft pineapple.			
	329	1	² 5.17	15	17.92	⁵ 2.42	Do.			
1976	6	1	.21	14	1.56	.085	Do.			
	34	2	1.78	21	.93	.64	Do.			
	37	2	4.01	20	.55	.80	Do.			
	38	2	4.03	28	.39	.80	Do.			
	39	1	² 2.97	15	.14	.11	Do.			
	61	2	1	11	.05	.009	Do.			
	62	(⁷)		(.09)	.062	.009	Do.			
	83	1	1.18	30	.29	.18	Do.			
	90	1	.12	8.3	1.08	.018	Do.			
	96	1	.51	22	.17	.036	Do.			
	101	2	.24	8.3	1.52	.054	Do.			
	108	2	² 4.40	13	.86	.08	Do.			
	126	2	.35	11	.39	.027	Do.			
	206	1	.24	1.3	.34	.0018	Do.			
	207	1	.15	2	.18	.0009	Do.			
	335	2	1	4	.69	.049	Do.			
	354	1	.31	3.2	4.36	.08	Do.			
1977	14	1	.17	.6	.27	.0004	Do.			
	30	2	.46	1.5	.16	.0022	Do.			
	36	2	.19	.5	.23	.0004	Crop chopped down.			
	60	3	.28	.4	.26	.0004	Plant residue on soil.			

See footnotes at end of table.

Table 3.--Sediment losses from runoff-producing storms--Continued
 [Figures in parentheses represent total runoff in inches]

Year	Julian collection date	Storm incre- ments	Sediment				Field condition			
			Rain	Runoff	Concen- tration	Total loss				
Number Inches Percent Lb/ft ³ Tons/acre										
F. Kunia Watershed--Continued										
1977	68	4	0.38	0.3	0.087	10.00018	Plant residue tilled into soil.			
	89	1	.70	31	1.15	.46	Bare field.			
	91	1	.45	36	.56	.16	Do.			
	117	-	2.53	.1	.44	1.0004	Do.			
	133	1	21.47	16	3.61	1.57	One-half planted to pineapple.			
	138	2	.53	16	2.72	.39	Three-fourths planted to pine- apple.			
	165	1	.09	22	1.10	.04	Planted to pine- apple.			
	181	2	1.95	7.7	9.71	2.65	Do.			
	308	1	.12	17	.44	.016	Do.			
	338	1	2.08	10	.82	.31	Do.			

¹Runoff calculated from barrel volume; water stage malfunction (use with caution).

²Recording rain gage malfunction.

³Water stage malfunction and barrel problems.

⁴Over 100 percent runoff.

⁵Barrel overflowed; concentration adjusted.

⁶Irrigated.

⁷Water from spring above flume.

Note: Dashes reflect uncertainty on the number of storm increments due to rain gage malfunction.

Table 4.—Hydrologic characteristics of recorded storms during monitoring period

HAWAII SITE: LAUFAOEHOE	YEAR: 1972	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)										CURVE NO.	EROSION INDEX	CRIME CODE	
		ANT. STORM DAY	STORM LENGTH (HRS)	RAIN (IN)	-RUNOFF-- (IN)	MOISTURE (IN)	5	10	15	30	60				
		49	12.25	3.20	0.00	0.00	1.20	0.60	0.80	0.80	0.60	0.26	38	18	
		50	4.50	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	87	0	
		54	2.92	1.30	0.00	0.00	3.50	3.60	3.00	2.80	2.00	1.10	0.45	64	3
		56	1.33	0.20	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.15	91	0	
		68	0.67	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	91	0	
		88	8.75	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	57	3	
		90	1.50	0.30	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.20	87	0	
		90	2.00	0.30	0.00	0.00	1.80	0.00	0.00	0.00	0.00	0.15	87	0	
		92	16.75	3.50	0.00	0.00	2.10	3.60	2.40	2.00	1.60	1.20	0.21	38	43
		93	1.08	0.40	0.00	0.00	5.60	1.20	1.20	0.80	0.40	0.20	0.37	83	0
		95	13.67	1.60	0.00	0.00	4.50	0.00	0.60	0.40	0.20	0.30	0.12	56	1
		96	13.33	1.30	0.00	0.00	5.50	0.00	0.60	0.40	0.40	0.30	0.09	61	3
		97	1.92	0.40	0.00	0.00	6.80	0.00	0.60	0.40	0.20	0.10	0.21	83	0
		98	7.00	0.70	0.00	0.00	3.70	0.00	0.00	0.00	0.00	0.20	0.10	74	0
		99	1.92	0.30	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.10	0.16	87	0
		100	10.00	1.50	0.00	0.00	4.30	1.20	0.60	0.80	0.40	0.40	0.15	57	5
		101	3.42	0.40	0.00	0.00	5.80	0.00	0.00	0.40	0.20	0.10	0.12	83	0
		101	11.42	0.60	0.00	0.00	4.60	0.00	0.00	0.00	0.00	0.10	0.05	77	0
		102	23.42	0.50	0.00	0.00	3.90	0.00	0.00	0.00	0.00	0.00	0.02	80	0
		104	27.42	0.40	0.00	0.00	3.30	0.00	0.00	0.00	0.00	0.10	0.01	83	0
		107	1.17	0.30	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.20	0.10	87	0
		108	2.92	0.90	0.00	0.00	0.70	1.20	1.20	1.20	0.80	0.60	0.31	69	5
		108	5.92	0.50	0.00	0.00	1.60	0.00	0.00	0.00	0.00	0.10	0.08	80	0
		109	8.17	1.00	0.00	0.00	2.10	0.00	0.00	0.40	0.20	0.20	0.12	67	0
		110	0.58	0.20	0.00	0.00	3.10	0.00	0.00	0.00	0.00	0.00	0.34	91	0
		110	4.08	0.30	0.00	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.07	87	0
		111	14.92	0.70	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.20	0.05	74	0
		117	23.83	1.10	0.00	0.00	2.40	1.20	0.60	0.40	0.20	0.20	0.05	65	1
		120	15.58	1.70	0.00	0.00	1.10	0.00	0.60	0.40	0.20	0.20	0.11	54	2
		123	2.58	0.50	0.00	0.00	1.70	1.20	1.20	0.80	0.40	0.20	0.19	80	1
		125	11.08	1.50	0.00	0.00	2.20	1.20	1.20	1.20	0.40	0.30	0.14	57	4
		126	9.25	2.20	0.06	0.00	1.20	1.20	1.20	1.20	1.00	0.90	0.24	57	1
		128	5.17	1.90	0.00	0.00	4.20	3.60	3.00	2.00	1.20	0.90	0.37	51	19
		140	5.50	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	87	0	
		156	2.33	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	87	0	

HAWAII SITE: LAUPAHOEHOE

YEAR: 1972

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)					CURVE NO.	FUSION INDEX	GROUP CODE	
					5	10	15	30	60				
157	3.83	0.30	0.00	0	0.30	0.00	0.00	0.00	0.10	0.07	87	0	
169	3.33	0.50	0.00	0	0.00	0.00	0.40	0.20	0.20	0.15	80	0	
170	4.42	0.70	0.00	0	0.50	1.20	0.60	0.40	0.20	0.30	0.16	74	0
171	7.42	0.70	0.00	0	1.20	0.00	0.40	0.20	0.20	0.09	74	2	
179	7.25	0.60	0.00	0	0.00	0.00	0.00	0.20	0.10	0.08	77	0	
179	12.42	1.50	0.00	0	0.60	2.40	1.80	1.60	1.00	0.50	0.12	57	10
180	5.42	1.20	0.00	0	2.10	0.60	0.80	0.60	0.50	0.22	63	4	
182	5.00	0.40	0.00	0	3.30	0.00	0.00	0.00	0.10	0.08	63	0	
183	1.00	0.20	0.00	0	3.70	0.00	0.00	0.00	0.10	0.20	91	0	
184	5.75	0.30	0.00	0	3.90	0.00	0.00	0.00	0.10	0.05	87	0	
184	7.08	0.50	0.00	0	2.10	0.00	0.00	0.00	0.20	0.07	80	0	
188	1.67	0.20	0.00	0	1.00	0.00	0.00	0.00	0.00	0.12	91	0	
188	33.83	4.70	0.00	0	1.00	1.20	1.20	0.80	0.80	0.60	0.14	30	26
190	36.00	0.30	0.00	0	4.90	0.00	0.00	0.00	0.00	0.00	0.00	97	0
195	8.58	1.40	0.00	0	0.30	1.20	0.60	0.80	0.60	0.60	0.16	59	5
207	40.50	5.70	0.04	1	0.00	2.40	1.80	1.20	0.80	0.70	0.14	36	32
209	3.92	0.30	0.00	0	5.70	0.00	0.00	0.00	0.00	0.00	0.07	87	0
210	8.58	0.90	0.00	0	6.00	1.20	0.60	0.40	0.40	0.20	0.10	69	2
210	12.00	0.40	0.00	0	6.90	0.00	0.00	0.00	0.00	0.00	0.03	0	3
222	5.33	0.50	0.00	0	0.00	0.00	0.00	0.40	0.20	0.20	0.09	80	0
224	6.92	0.90	0.00	0	0.50	0.00	0.60	0.40	0.40	0.20	0.13	69	2
226	6.33	2.00	0.00	0	1.40	1.20	0.60	0.80	0.60	0.60	0.32	50	4
228	3.08	0.20	0.00	0	2.90	0.00	0.00	0.00	0.00	0.00	0.06	91	4
229	11.67	1.00	0.00	0	2.20	0.00	0.00	0.00	0.20	0.20	0.08	67	1
230	20.00	6.10	0.16	3	3.20	2.40	1.80	1.20	1.20	0.90	0.31	32	54
231	1.75	0.40	0.00	0	9.30	1.20	0.60	0.40	0.20	0.20	0.23	33	0
232	10.58	3.40	0.03	1	7.70	1.20	0.80	0.60	0.60	0.32	42	15	
242	6.25	0.60	0.00	0	0.00	0.00	0.00	0.20	0.20	0.09	77	0	
248	10.83	1.90	0.00	0	0.00	1.20	1.20	1.20	1.00	0.70	0.18	51	13
257	0.42	0.60	0.00	0	0.00	2.40	1.80	1.60	0.00	0.00	1.43	77	0
262	10.75	0.80	0.00	0	0.60	0.00	0.60	0.40	0.40	0.10	0.07	71	1
265	64.75	0.90	0.00	0	0.80	0.00	0.00	0.00	0.00	0.00	0.01	69	0
272	0.25	0.40	0.00	0	0.00	3.60	1.80	1.60	0.00	0.00	1.60	83	0
273	1.08	0.40	0.00	0	0.40	0.00	0.60	0.40	0.40	0.20	0.37	63	4
273	12.67	0.40	0.00	0	0.80	0.00	0.00	0.40	0.00	0.00	0.03	83	0
274	6.17	0.70	0.00	0	1.20	0.00	0.00	0.60	0.40	0.20	0.11	74	0
277	2.92	0.70	0.00	0	1.90	0.00	0.00	0.60	0.40	0.30	0.24	74	1
279	1.58	0.80	0.00	0	1.40	1.20	0.80	0.80	0.50	0.30	0.51	71	4

HAWAII SITE: LAUPAHOEHOE

YEAR: 1972

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES

STORM NUMBER	MILLIAN LENGTH DAY	STORM (HRS)	RAIN		RUNOFF		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN)	CUME EROSION INDEX CODE
			(IN)	(IN)	(IN)	(IN)				
280	3.67	0.30	0.00	0	1.50	0.00	0.00	0.00	0.00	0 4
289	4.58	0.30	0.00	0	0.00	0.00	0.00	0.20	0.10	0 4
295	18.17	1.00	0.00	0	0.00	0.00	0.00	0.20	0.10	0 4
296	14.17	1.20	0.00	0	1.00	0.00	0.00	0.40	0.20	0 4
297	5.42	0.50	0.00	0	2.20	0.00	0.00	0.00	0.10	0 4
297	8.00	1.50	0.00	0	2.70	1.20	1.20	0.60	0.50	0 4
298	4.92	0.20	0.00	0	4.20	0.00	0.00	0.00	0.00	0 4
300	12.00	0.50	0.00	0	4.40	0.00	0.00	0.20	0.20	0 4
301	0.92	0.20	0.00	0	3.90	0.00	0.00	0.00	0.00	0 4
304	3.33	1.50	0.00	0	0.70	2.40	2.40	1.20	0.90	0 4
305	3.92	0.90	0.00	0	2.20	1.20	1.20	0.80	0.50	0 4
307	23.08	2.40	0.00	0	2.40	1.20	0.60	0.40	0.20	0 4
309	14.00	1.30	0.00	0	4.80	0.00	0.00	0.20	0.20	0 4
310	33.33	1.40	0.00	0	4.60	0.00	0.00	0.40	0.20	0 4
311	38.58	5.20	0.00	0	5.10	1.20	0.60	0.40	0.40	0 4
314	8.33	0.30	0.00	0	7.90	0.00	0.00	0.00	0.00	0 4
315	40.17	8.70	0.00	0	6.90	2.40	1.80	1.60	1.20	0 4
318	33.33	0.30	0.00	0	9.00	0.00	0.00	0.00	0.00	0 4
320	13.08	0.90	0.00	0	9.00	1.20	0.60	0.40	0.40	0 4
320	0.67	0.20	0.00	0	1.20	0.00	0.00	0.00	0.00	0 4
321	25.83	2.30	0.00	0	1.40	1.20	1.20	0.80	0.50	0 4
322	4.75	1.10	0.00	0	3.70	1.20	1.20	0.80	0.60	0 4
340	12.33	1.20	0.00	0	0.00	0.00	0.00	0.20	0.20	0 4
354	8.00	1.00	0.00	0	0.00	0.00	0.00	0.00	0.10	0 4
357	8.58	0.50	0.00	0	1.00	0.00	0.00	0.00	0.00	0 4
361	27.58	1.90	0.00	0	0.50	1.20	0.60	0.80	0.51	0 4
362	44.67	0.30	0.00	0	2.40	0.00	0.00	0.00	0.00	0 4

HAWAII SITE: LAUPAHEHOE

YEAR: 1973

STORM DAY	JULIAN LENGTH (HRS)	ANT. RAIN --RUNOFF-- --MOISTURE--			TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			AUG INT	CUM NO	FROSTON INDEX CODE
		(IN)	(IN)	(%)	(IN)	(IN)	(IN)			
1	4.30	0.20	0.00	0	0.00	0.00	0.00	0.05	91	4
2	5.42	0.90	0.00	0	0.20	0.00	0.40	0.30	69	4
13	6.75	1.30	0.00	0	0.00	0.00	0.40	0.17	61	4
19	17.33	1.00	0.00	0	0.00	0.00	0.40	0.19	67	1
22	31.33	0.40	0.00	0	1.00	0.00	0.00	0.06	63	4
27	91.33	8.00	0.00	0	0.40	1.20	1.20	0.70	59	4
31	10.67	1.00	0.00	0	8.00	1.20	0.40	0.20	54	4
33	22.25	1.00	0.00	0	1.00	1.20	0.80	0.50	67	4
39	48.00	0.80	0.00	0	0.00	0.00	0.00	0.04	71	4
43	8.17	0.80	0.00	0	0.80	0.00	0.60	0.20	71	4
51	14.75	5.40	0.00	0	0.00	1.20	1.20	1.20	37	4
54	25.67	0.40	0.00	0	5.40	0.00	0.00	0.02	63	4
56	42.50	6.10	0.00	0	5.80	1.20	0.60	0.60	72	4
59	35.50	1.50	0.00	0	6.50	1.20	0.80	0.40	57	3
61	24.50	0.60	0.00	0	7.60	0.00	0.00	0.20	77	0
63	11.00	0.30	0.00	0	2.10	0.00	0.00	0.00	67	0
64	40.08	3.80	0.00	0	2.40	1.20	0.80	0.60	40	0
67	21.58	2.60	0.00	0	4.70	2.40	2.40	1.40	20	0
68	33.08	1.50	0.00	0	6.70	0.00	0.60	0.40	20	0
71	3.92	0.30	0.00	0	4.10	0.00	0.00	0.00	0.07	4
73	13.67	1.40	0.00	0	1.80	0.00	0.60	0.20	10	0
74	16.25	1.50	0.00	0	1.70	1.20	0.60	0.40	20	0
88	31.42	4.90	0.00	0	0.00	2.40	1.80	1.40	90	0
94	4.42	2.60	0.00	0	0.00	1.20	1.20	1.20	59	4
113	4.00	0.40	0.00	0	0.00	0.00	0.00	0.10	83	0
117	4.83	0.30	0.00	0	0.40	0.00	0.00	0.00	87	0
118	86.00	0.40	0.00	0	0.70	0.00	0.00	0.00	83	0
123	54.08	0.90	0.00	0	0.40	0.00	0.00	0.20	10	0
127	6.25	1.30	0.00	0	0.90	1.20	1.20	0.60	51	4
136	14.17	0.90	0.00	0	0.00	0.00	0.00	0.20	69	0
138	16.42	1.40	0.00	0	0.90	0.00	0.40	0.20	59	1
141	10.75	0.90	0.00	0	2.30	0.00	0.60	0.40	20	0
143	7.33	1.10	0.00	0	2.30	0.00	1.20	0.80	40	0
148	1.42	0.20	0.00	0	1.10	0.00	0.00	0.00	14	0
155	6.00	0.30	0.00	0	0.00	0.00	0.00	0.00	67	0
161	12.50	2.90	0.00	0	0.00	1.20	1.20	0.80	15	4
184	10.83	0.60	0.00	0	0.00	1.20	0.60	0.40	20	0
185	11.83	1.30	0.05	3	0.60	1.20	0.60	0.40	15	4

HAWAII SITE: LAUPAHOEHOE

YEAR: 1973

STORM JULIAN DAY	LENGTH (HRS)	ANT. RAIN		--RUNOFF--		MAXIMUM MOISTURE (IN)	TIME INTERVAL (MIN) AND INTENSIIES (IN/HR)			CURVE NO.	FUSION INDEX	CROP CODE
		(IN)	(IN)	(IN)	(%)		5	10	15			
189	6.33	0.40	0.00	0	2.40	0.00	0.00	0.00	0.10	0.06	83	0
190	4.67	0.20	0.00	0	2.20	0.00	0.00	0.00	0.04	0.04	81	0
191	1.33	0.20	0.00	0	0.60	0.00	0.00	0.00	0.15	91	0	4
195	7.58	0.70	0.07	11	0.40	1.20	0.60	0.80	0.40	0.30	0.09	86
206	6.25	0.30	0.00	0	0.00	0.00	0.00	0.00	0.10	0.00	87	0
217	4.33	0.30	0.00	0	0.00	0.00	0.00	0.00	0.10	0.06	87	0
221	0.75	0.70	0.00	0	0.30	1.20	1.20	0.80	1.00	0.90	0.93	74
224	2.50	0.50	0.00	0	0.70	0.00	0.00	0.00	0.20	0.20	0.20	80
226	5.92	0.40	0.00	0	1.20	0.00	0.00	0.00	0.10	0.06	83	0
234	14.00	1.00	0.00	0	0.00	0.00	0.00	0.40	0.20	0.30	0.07	67
236	6.17	0.60	0.00	0	1.00	0.00	0.00	0.00	0.10	0.09	0.09	70
241	4.75	0.20	0.00	0	0.60	0.00	0.00	0.00	0.00	0.00	0.04	91
250	3.92	0.60	0.00	0	0.00	1.20	0.60	0.40	0.20	0.15	77	0
256	18.50	1.90	0.00	0	0.00	0.00	0.00	0.40	0.20	0.30	0.10	51
258	40.75	0.70	0.00	0	1.90	0.00	0.00	0.00	0.10	0.02	74	0
263	2.83	1.00	0.00	0	0.70	1.20	0.60	0.60	0.40	0.35	67	4
266	14.00	1.20	0.00	0	1.00	0.00	0.60	0.40	0.40	0.40	0.08	63
267	10.17	1.20	0.00	0	2.20	1.20	0.60	0.60	0.60	0.60	0.12	68
272	9.33	1.20	0.00	0	1.20	0.00	0.60	0.40	0.20	0.30	0.13	62
276	3.00	1.00	0.00	0	1.20	1.20	1.20	0.80	0.80	0.50	0.33	67
284	0.67	0.30	0.00	0	0.00	0.00	0.00	0.00	0.20	0.00	0.45	27
284	21.92	0.40	0.00	0	0.30	0.00	0.00	0.00	0.00	0.10	0.02	83
286	31.75	0.80	0.00	0	0.70	0.00	0.00	0.00	0.20	0.10	0.03	71
289	22.33	0.60	0.00	0	1.50	0.00	0.00	0.40	0.20	0.10	0.03	77
291	16.25	2.70	0.00	0	1.40	1.20	0.60	0.40	0.40	0.50	0.17	43
292	36.67	2.00	0.00	0	3.30	1.20	1.20	0.80	0.60	0.40	0.05	50
296	2.08	0.30	0.00	0	4.70	0.00	0.00	0.00	0.00	0.14	87	0
298	42.83	0.30	0.00	0	0.30	0.00	0.00	0.00	0.00	0.00	0.00	87
300	4.67	0.30	0.00	0	0.60	0.00	0.00	0.00	0.00	0.06	0.06	87
302	14.33	0.40	0.00	0	0.60	0.00	0.00	0.00	0.00	0.03	83	0
311	24.75	0.80	0.00	0	0.00	0.00	0.60	0.40	0.20	0.03	71	0
315	30.25	17.60	0.00	0	0.80	4.80	3.60	3.00	2.00	2.60	0.58	10
323	19.92	7.20	0.26	4	0.00	3.60	3.00	2.80	2.00	1.70	0.36	30
325	10.00	1.20	0.05	4	7.20	1.20	0.60	0.40	0.30	0.12	72	3
326	7.17	1.70	0.00	0	8.40	1.20	0.60	0.60	0.50	0.24	54	4
327	9.42	1.80	0.18	10	10.10	1.20	0.60	0.40	0.60	0.19	70	7
328	12.75	2.70	0.00	0	11.90	2.40	1.20	0.80	0.60	0.21	43	11
330	31.67	2.70	0.06	2	7.40	2.40	1.80	1.20	1.00	0.03	51	20

HAWAII SITE: LAUFAHOEHOE

YEAR: 1973

STORM JULIAN LENGTH DAY	RAIN (IN)	--RJNDIFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			AVG INT.	CURVE NO.	EPOSITION INDEX	CROP CODE
				5	10	15				
332	3.00	1.30	0.11	8	7.20	2.40	1.80	1.60	1.20	1.00
335	4.50	0.50	0.00	0	4.00	0.00	0.00	0.00	0.20	0.20
335	30.00	7.10	0.39	5	1.80	2.40	1.80	1.60	1.00	0.80
342	1.83	1.50	0.03	2	0.00	3.60	3.00	2.80	2.00	1.30
343	10.33	0.30	0.00	0	1.50	0.00	0.00	0.00	0.00	0.00
345	3.00	0.60	0.03	5	1.80	1.20	0.60	0.40	0.20	0.20
349	2.25	0.50	0.00	0	0.60	0.00	0.60	0.40	0.40	0.30
363	3.17	0.70	0.00	0	0.00	0.00	0.00	0.40	0.30	0.22
364	3.25	0.20	0.00	0	0.70	0.00	0.00	0.00	0.00	0.06

HAWAII SITE: LAUFAHEOE

YEAR: 1974

TIME INTERVAL (MIN) AND

MAXIMUM RAINFALL INTENSITIES

(IN/HR)

STORM DAY	JULIAN DAY	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES			AVG INT	CURVE NO	EROSION INDEX	CROP CODE
					5	10	15				
9	5.00	1.20	0.00	0.00	1.20	1.20	0.80	0.60	0.24	63	6
11	2.25	0.50	0.00	0.20	0.60	0.40	0.20	0.20	0.22	80	0
18	5.42	3.40	0.19	6	0.00	2.40	2.40	2.00	1.60	1.05	51
23	17	4.10	3.85	94	3.40	2.40	1.60	1.20	0.90	0.21	98
24	4.67	0.50	0.13	25	4.10	1.20	0.60	0.40	0.30	0.23	94
25	8.92	0.40	0.11	28	4.60	1.20	1.20	0.80	0.40	0.12	95
32	9.67	3.60	0.00	0	0.00	4.80	3.00	2.80	2.60	0.37	36
39	23.75	1.70	0.00	0	0.00	1.20	0.60	0.40	0.20	0.07	54
40	12.08	1.00	0.00	0	1.70	1.20	0.60	0.40	0.20	0.08	67
40	3.00	0.30	0.00	0	2.70	0.00	0.00	0.00	0.00	0.10	87
41	16.75	0.50	0.00	0	3.00	0.00	0.60	0.40	0.20	0.10	80
41	38.67	1.00	0.00	0	3.50	1.20	0.60	0.40	0.40	0.20	67
45	29.67	0.20	0.00	0	2.80	0.00	0.00	0.00	0.00	0.00	91
62	14.50	0.30	0.00	0	0.00	0.00	0.00	0.00	0.00	0.10	87
63	28.58	2.60	0.00	0	0.30	3.60	2.40	2.40	1.40	0.90	0.09
65	14.75	2.80	0.00	0	2.90	1.20	1.20	0.80	1.00	0.70	0.19
66	4.25	0.30	0.04	12	5.70	0.00	0.00	0.00	0.20	0.10	94
67	14.75	0.30	0.00	0	6.00	0.00	0.00	0.00	0.00	0.02	87
67	4.58	0.40	0.05	13	6.00	0.00	0.00	0.00	0.20	0.10	92
71	2.25	0.20	0.00	0	1.00	0.00	0.00	0.00	0.00	0.08	91
73	11.50	1.10	0.15	13	0.20	0.00	0.60	0.40	0.20	0.20	0.09
74	8.92	0.40	0.04	10	1.30	0.00	0.00	0.00	0.00	0.10	92
74	5.50	0.80	0.12	15	1.70	1.20	0.60	0.60	0.40	0.20	87
77	10.25	2.20	0.50	23	2.30	3.60	2.40	1.60	1.00	0.70	0.26
78	4.17	1.10	0.19	19	4.50	2.40	1.80	1.60	1.20	0.80	0.73
78	12.17	5.40	2.34	43	4.50	4.80	4.20	3.60	2.80	1.90	0.59
82	10.25	0.90	0.06	7	8.70	0.00	0.00	0.40	0.20	0.08	81
84	29.08	4.40	0.85	19	9.90	2.40	1.80	1.60	1.00	0.90	0.15
95	29.08	0.20	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	91
97	1.67	0.40	0.00	0	0.20	0.00	0.00	0.00	0.20	0.10	24
98	13.83	2.50	0.28	11	0.60	1.20	0.60	0.60	0.50	0.18	64
105	4.50	0.50	0.00	0	0.00	0.00	0.00	0.00	0.00	0.20	11
106	30.50	3.10	0.58	19	0.50	2.40	1.80	1.60	1.00	0.50	0.10
107	18.33	2.60	0.20	8	3.60	2.40	1.20	0.80	0.60	0.14	66
108	7.17	1.70	0.17	10	6.20	2.40	1.80	1.60	1.00	0.47	72
108	13.00	1.40	0.04	3	7.90	1.20	0.60	0.80	0.40	0.11	80
109	7.58	2.10	0.15	7	9.30	3.60	2.40	2.40	1.80	1.00	41
110	11.17	1.40	0.16	11	11.40	2.40	1.80	1.60	1.00	0.50	0.19

HAWAII SITE: LAUPAHOEHOE

YEAR: 1974

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (%)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)	CLOUD EROSION CRATE INDEX CODE		
						5	10	15
111	10.50	1.00	0.11	111	12.30	1.29	0.60	0.40
127	20.08	0.30	0.00	0	0.00	0.00	0.00	0.00
129	16.75	2.00	0.00	0	0.30	1.20	1.20	0.80
136	0.08	0.20	0.00	0	0.00	0.00	0.00	0.00
137	9.25	2.80	0.00	0	0.20	1.20	1.20	0.80
138	3.08	0.60	0.00	0	0.30	1.20	0.60	0.40
139	63.58	0.60	0.00	0	0.30	0.00	0.00	0.00
151	75.50	0.50	0.00	0	0.00	0.00	0.00	0.00
156	2.92	0.30	0.00	0	0.50	0.00	0.00	0.00
161	10.00	0.50	0.00	0	0.30	0.00	0.00	0.00
165	13.00	0.80	0.00	0	0.50	0.00	0.00	0.00
174	43.08	0.90	0.00	0	0.00	0.00	0.00	0.00
186	8.00	0.30	0.00	0	0.00	0.00	0.00	0.00
187	6.08	0.40	0.00	0	0.30	0.00	0.00	0.00
187	20.67	0.20	0.00	0	0.70	0.00	0.00	0.00
197	17.08	1.60	0.00	0	0.00	1.20	0.60	0.40
205	6.25	0.60	0.00	0	0.00	0.00	0.00	0.00
207	27.92	1.40	0.00	0	0.60	0.00	0.00	0.00
213	2.92	0.40	0.00	0	0.00	0.00	0.00	0.00
214	13.42	0.30	0.00	0	0.40	0.00	0.00	0.00
216	0.58	0.20	0.00	0	0.70	0.00	0.00	0.00
223	14.92	1.10	0.00	0	0.00	0.00	0.00	0.00
225	7.42	0.20	0.00	0	1.10	1.20	0.60	0.40
227	7.00	0.30	0.00	0	1.30	0.00	0.00	0.00
231	2.75	0.30	0.00	0	0.30	0.00	0.00	0.00
231	4.25	0.30	0.00	0	0.60	0.00	0.00	0.00
267	3.08	0.30	0.00	0	0.00	0.00	0.00	0.00
284	41.42	1.00	0.00	0	0.00	0.00	0.00	0.00
292	0.39	0.20	0.00	0	0.00	0.00	0.00	0.00
299	33.08	7.00	0.00	0	0.00	3.60	2.00	1.40
302	1.75	0.20	0.00	0	0.00	0.00	0.00	0.00
303	3.08	1.10	0.00	0	0.00	1.20	0.60	0.30
304	4.08	0.30	0.00	0	0.00	0.00	0.00	0.00
308	3.16	0.04	0.00	0	1.40	0.00	0.00	0.01
309	7.53	0.12	0.00	0	0.34	0.24	0.12	0.00

HAWAII SITE: LAUFAHDEHDE

YEAR: 1974

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	---RUNOFF--- (%)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)		AVG INT.	INT NO.	EFFECTIVE EROSION (IN/H) INDEX	CUE 2
					5	10	15			
310	7.78	0.07	0.00	0	0.16	0.12	0.06	0.04	0.02	0.00
311	6.51	0.52	0.00	0	0.23	1.32	1.26	1.16	0.20	0.19
312	4.25	0.11	0.00	0	0.76	0.07	0.00	0.00	0.04	0.02
314	0.94	0.07	0.00	0	0.83	0.00	0.00	0.04	0.06	0.00
314	6.45	0.30	0.00	0	0.78	0.60	0.60	0.48	0.26	0.13
315	6.87	1.40	0.00	0	1.07	2.52	2.16	1.92	1.32	0.20
316	0.40	0.06	0.00	0	2.40	0.00	0.00	0.00	0.00	0.15
317	5.38	0.41	0.00	0	1.94	1.32	1.02	0.72	0.38	0.19
318	5.96	0.14	0.00	0	2.24	0.24	0.18	0.16	0.14	0.08
318	2.16	0.03	0.00	0	2.38	0.00	0.00	0.00	0.00	0.01
319	1.76	0.06	0.00	0	2.41	0.00	0.00	0.00	0.00	0.04
320	0.34	0.06	0.00	0	2.10	0.07	0.00	0.00	0.00	0.16
321	11.30	1.98	0.00	0	0.76	2.52	2.28	1.92	1.40	0.95
321	5.43	0.14	0.00	0	2.68	0.00	0.00	0.06	0.06	0.03
341	0.41	0.26	0.00	0	0.00	0.84	0.78	0.76	0.00	0.64
342	2.71	0.18	0.00	0	0.26	0.60	0.48	0.48	0.04	0.24
343	2.82	0.05	0.00	0	0.44	0.00	0.00	0.00	0.00	0.02
343	0.88	0.12	0.00	0	0.49	0.09	0.09	0.09	0.04	0.00
344	0.71	0.14	0.00	0	0.61	1.08	0.00	0.04	0.04	0.20
344	2.05	0.20	0.00	0	0.75	0.60	0.36	0.32	0.14	0.09
345	1.64	0.12	0.00	0	0.94	0.12	0.06	0.06	0.06	0.07
348	3.14	0.20	0.00	0	0.62	0.24	0.18	0.12	0.08	0.06
349	11.49	1.73	0.00	0	0.65	1.08	1.08	0.92	0.62	0.44
350	18.45	1.50	0.00	0	2.05	0.72	0.72	0.52	0.49	0.24
351	5.75	0.16	0.00	0	3.43	0.09	0.09	0.18	0.09	0.09
351	1.84	0.06	0.00	0	3.59	0.09	0.09	0.09	0.04	0.02
352	3.66	0.14	0.00	0	3.65	0.09	0.12	0.12	0.10	0.06
353	4.30	0.08	0.00	0	3.79	0.00	0.00	0.00	0.00	0.02
354	18.89	7.85	0.00	0	3.67	2.64	2.04	1.72	1.38	1.14
355	23.98	4.71	0.00	0	9.79	1.32	1.32	1.24	1.06	0.80
357	1.17	0.08	0.00	0	12.78	0.12	0.06	0.06	0.04	0.06
357	8.81	0.45	0.00	0	12.72	0.36	0.36	0.32	0.24	0.23
357	3.17	0.04	0.00	0	13.17	0.00	0.00	0.00	0.00	0.01
358	2.88	0.07	0.00	0	13.21	0.00	0.00	0.04	0.02	0.02
359	57.10	5.29	0.00	0	13.20	0.94	0.92	0.70	0.47	0.09
362	4.48	0.31	0.00	0	5.93	0.36	0.30	0.24	0.16	0.12
365	2.55	0.08	0.00	0	3.31	0.00	0.04	0.04	0.03	0.03

HAWAII SITE: LAUPAHOEHOF

YEAR: 1975

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	RAIN --RUNOFF-- (IN)	ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN)	(MIN) INTERVAL (IN/HR)	INTERNAL AMOUNTS		EXTERNAL AMOUNTS		
							5	10	15	30	60
2	19.31	1.41	0.00	0	0.00	1.56	0.32	1.08	0.62	0.34	0.07
3	6.11	0.21	0.00	0	1.41	0.00	0.24	0.16	0.08	0.04	0.03
4	23.21	3.20	0.00	0	1.61	1.80	1.32	1.04	0.64	0.45	0.14
5	28.78	2.55	0.00	0	4.82	1.68	0.90	0.92	0.68	0.46	0.09
6	75.87	22.28	0.00	0	7.36	2.28	2.04	1.60	1.30	1.01	0.29
14	4.24	0.76	0.00	0	0.00	0.60	0.60	0.56	0.46	0.34	0.16
15	4.66	0.95	0.00	0	0.76	1.44	1.26	1.20	1.08	0.70	0.28
16	2.48	0.03	0.00	0	1.71	0.00	0.00	0.00	0.00	0.01	0.00
16	7.11	0.17	0.00	0	1.74	0.24	0.18	0.16	0.10	0.07	0.02
24	1.19	0.09	0.00	0	0.00	0.24	0.18	0.20	0.12	0.08	0.02
25	2.74	0.03	0.00	0	0.09	0.00	0.00	0.00	0.00	0.00	0.00
26	0.74	0.24	0.00	0	0.12	0.48	0.48	0.44	0.38	0.32	0.09
27	17.34	2.82	0.00	0	0.36	0.72	0.66	0.64	0.54	0.42	0.11
28	2.16	0.03	0.00	0	0.18	0.00	0.00	0.00	0.00	0.01	0.00
32	7.33	0.59	0.00	0	2.84	0.24	0.24	0.24	0.22	0.20	0.03
32	21.37	1.80	0.00	0	0.62	1.68	1.26	1.08	0.84	0.74	0.17
33	4.27	0.22	0.00	0	2.42	0.24	0.18	0.16	0.12	0.12	0.05
34	0.92	0.14	0.00	0	2.61	0.00	0.00	0.00	0.00	0.15	0.01
34	3.86	0.57	0.00	0	2.75	1.32	1.14	1.00	0.62	0.34	0.15
35	5.53	0.11	0.00	0	3.33	0.00	0.00	0.00	0.00	0.02	0.01
36	16.97	0.86	0.00	0	3.43	0.24	0.24	0.20	0.14	0.11	0.04
41	5.40	0.74	0.00	0	0.86	0.60	0.54	0.40	0.34	0.33	0.14
42	7.92	0.25	0.00	0	0.74	0.24	0.18	0.20	0.12	0.10	0.04
42	9.10	2.10	0.00	0	0.98	0.96	0.96	0.88	0.64	0.53	0.17
43	6.48	0.63	0.00	0	3.08	1.08	0.96	0.96	0.54	0.28	0.09
44	1.58	0.18	0.00	0	3.71	0.24	0.18	0.12	0.14	0.13	0.04
46	0.82	0.09	0.00	0	3.89	0.36	0.30	0.24	0.14	0.09	0.02
48	2.92	0.80	0.00	0	0.91	1.80	1.62	1.48	1.02	0.72	0.21
48	4.81	0.64	0.00	0	1.07	0.48	0.48	0.48	0.46	0.38	0.13
48	15.84	2.44	0.00	0	1.72	0.69	0.54	0.44	0.36	0.29	0.15
49	9.89	0.40	0.00	0	4.14	0.24	0.24	0.20	0.18	0.12	0.04
50	2.34	0.05	0.00	0	4.38	0.00	0.00	0.00	0.00	0.01	0.01
54	2.96	0.78	0.00	0	0.45	1.44	0.84	0.64	0.51	0.26	0.04
56	1.75	0.07	0.00	0	0.78	0.00	0.10	0.04	0.02	0.03	0.01
57	3.23	0.05	0.00	0	0.85	0.00	0.00	0.00	0.00	0.02	0.01
57	6.98	0.80	0.00	0	0.90	0.84	0.78	0.72	0.51	0.31	0.14
58	4.65	0.18	0.00	0	1.70	0.48	0.36	0.24	0.12	0.08	0.01
58	1.74	0.16	0.00	0	1.88	0.36	0.30	0.28	0.18	0.03	0.01

HAWAII SITE: LAUFAHOEHE

YEAR:

1975

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES,
(IN/HR)

STORM DAY	JULIAN LENGTH (HRS)	RAIN --RUNOFF--		ANT. MOISTURE		TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES, (IN/HR)		495		496		497		
		(IN)	(IN)	(IN)	(%)	5	10	15	30	50	60	100	150	200
58	20, 61	1.87	0.00	0	2.04	0.96	0.90	0.89	0.44	0.40	0.39	0.39	0.39	0.39
60	22, 35	0.09	0.00	0	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	5, 75	0.20	0.00	0	3.14	0.24	0.18	0.12	0.08	0.05	0.05	0.05	0.05	0.05
63	1, 48	0.04	0.00	0	2.49	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03
63	22, 97	1.13	0.00	0	0.34	0.36	0.30	0.22	0.16	0.16	0.16	0.16	0.16	0.16
64	0, 39	0.03	0.00	0	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67	2, 43	0.07	0.00	0	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	6, 92	0.18	0.00	0	1.27	0	0.36	0.18	0.12	0.00	0.00	0.02	0.02	0.02
69	3, 81	0.15	0.00	0	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	8, 27	0.48	0.00	0	0.40	0.34	0.36	0.24	0.20	0.12	0.06	0.06	0.06	0.06
70	71, 74	8.55	0.00	0	0.88	0.96	0.96	0.92	0.72	0.50	0.12	0.12	0.12	0.12
74	5, 93	0.06	0.00	0	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	1, 22	0.05	0.00	0	0.62	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
75	5, 69	0.09	0.00	0	0.11	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
76	5, 18	0.04	0.00	0	0.21	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
77	12, 95	0.63	0.00	0	0.26	0.60	0.30	0.24	0.18	0.15	0.05	0.05	0.05	0.05
87	9, 80	1.27	0.00	0	0.60	0.60	0.48	0.40	0.32	0.28	0.13	0.13	0.13	0.13
88	8, 45	1.40	0.00	0	1.27	0.72	0.66	0.44	0.36	0.22	0.11	0.11	0.11	0.11
89	8, 83	0.23	0.00	0	2.67	0.00	0.18	0.12	0.06	0.07	0.03	0.03	0.03	0.03
91	0, 89	0.06	0.00	0	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	9, 15	0.42	0.00	0	2.96	0.72	0.65	0.52	0.30	0.15	0.05	0.05	0.05	0.05
94	3, 57	0.18	0.00	0	0.71	0.36	0.18	0.12	0.12	0.18	0.05	0.05	0.05	0.05
94	3, 28	0.04	0.00	0	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	4, 03	0.19	0.00	0	0.69	0.36	0.30	0.20	0.16	0.12	0.05	0.05	0.05	0.05
111	5, 41	0.30	0.00	0	0.00	0.00	0.24	0.24	0.12	0.08	0.10	0.05	0.05	0.05
112	7, 71	0.39	0.00	0	0.30	0.24	0.24	0.16	0.16	0.14	0.10	0.05	0.05	0.05
113	1, 91	0.06	0.00	0	0.69	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03
114	0, 35	0.03	0.00	0	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	7, 30	0.14	0.00	0	0.77	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02
119	3, 21	0.15	0.00	0	0.17	0.16	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.04
155	7, 72	0.10	0.00	0	0.00	0.24	0.06	0.04	0.02	0.02	0.01	0.01	0.01	0.01
160	0, 11	0.02	0.00	0	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161	0, 11	0.02	0.00	0	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169	0, 21	0.03	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	0, 07	0.02	0.00	0	0.03	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	0, 07	0.02	0.00	0	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	0, 54	0.03	0.00	0	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
173	0, 07	0.02	0.00	0	0.09	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

HAWAII SITE: LAUFAHOEHOE

YEAR: 1975

STORM DAY	JULIAN LENGTH (HRS)	RAIN		--RUNOFF--		ANT. MOISTURE		TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HF)		CLOUD INDEX		EROSION INDEX	
		(IN)	(IN)	(IN)	(%)	(IN)	(IN)	10	15	30	60	100	1000
176	7.88	0.33	0.00	0	0.09	0.24	0.24	0.20	0.14	0.08	0.04	0.04	0.04
177	0.18	0.03	0.00	0	0.38	0.00	0.09	0.00	0.00	0.00	0.14	0.07	0.04
184	11.10	0.11	0.00	0	0.00	0.00	0.00	0.04	0.02	0.01	0.01	0.05	0.04
185	14.24	0.14	0.00	0	0.11	0.24	0.18	0.12	0.08	0.05	0.01	0.23	0.04
187	3.54	0.04	0.00	0	0.25	0.00	0.06	0.04	0.02	0.01	0.01	0.05	0.04
196	0.18	0.05	0.00	0	0.00	0.36	0.19	0.00	0.00	0.00	0.29	0.07	0.04
196	6.42	0.16	0.00	0	0.05	0.12	0.06	0.08	0.06	0.04	0.03	0.23	0.04
197	1.78	0.05	0.00	0	0.21	0.24	0.12	0.08	0.00	0.00	0.03	0.02	0.04
198	2.86	0.21	0.00	0	0.26	0.24	0.18	0.16	0.10	0.09	0.02	0.01	0.04
201	7.18	0.05	0.00	0	0.48	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.04
205	0.07	0.02	0.00	0	0.05	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.04
205	0.81	0.03	0.00	0	0.07	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.04
207	0.11	0.03	0.00	0	0.05	0.00	0.00	0.00	0.00	0.00	0.24	0.09	0.04
207	10.65	0.34	0.00	0	0.07	0.24	0.12	0.08	0.04	0.04	0.03	0.00	0.04
208	3.27	0.11	0.00	0	0.41	0.24	0.18	0.15	0.12	0.06	0.03	0.04	0.04
211	0.45	0.03	0.00	0	0.48	0.00	0.00	0.00	0.00	0.00	0.06	0.09	0.04
211	1.82	0.27	0.00	0	0.50	0.72	0.54	0.48	0.36	0.22	0.15	0.09	0.04
212	3.88	0.25	0.00	0	0.78	0.36	0.30	0.28	0.20	0.15	0.06	0.29	0.04
212	0.71	0.03	0.00	0	0.66	0.00	0.00	0.00	0.00	0.00	0.05	0.08	0.04
213	3.79	0.36	0.00	0	0.70	0.60	0.54	0.56	0.38	0.23	0.08	0.05	0.04
213	10.38	0.86	0.00	0	0.94	0.96	0.84	0.64	0.46	0.25	0.08	0.70	0.04
214	12.37	0.28	0.00	0	1.80	0.12	0.12	0.08	0.08	0.04	0.02	0.08	0.04
216	8.32	0.30	0.00	0	2.08	0.36	0.24	0.20	0.14	0.12	0.04	0.27	0.04
221	7.18	0.60	0.00	0	3.00	1.20	1.08	0.84	0.60	0.43	0.18	0.77	0.04
222	12.17	0.33	0.00	0	0.60	0.24	0.18	0.16	0.14	0.09	0.03	0.06	0.04
223	0.09	0.03	0.00	0	0.93	0.12	0.00	0.00	0.00	0.00	0.00	0.33	0.04
225	5.76	0.06	0.00	0	0.96	0.12	0.06	0.04	0.02	0.02	0.01	0.05	0.04
225	4.87	0.15	0.00	0	1.03	0.48	0.24	0.20	0.10	0.05	0.03	0.23	0.04
226	8.57	0.48	0.00	0	1.17	0.36	0.30	0.20	0.16	0.13	0.06	0.04	0.04
226	7.21	0.18	0.00	0	1.05	0.72	0.42	0.32	0.18	0.10	0.02	0.02	0.04
227	3.35	0.11	0.00	0	1.23	0.00	0.06	0.04	0.06	0.04	0.02	0.05	0.04
227	5.75	0.12	0.00	0	1.01	0.24	0.18	0.16	0.10	0.05	0.02	0.04	0.04
228	3.21	0.06	0.00	0	1.13	0.24	0.12	0.08	0.04	0.04	0.02	0.07	0.04
228	2.61	0.08	0.00	0	1.16	0.12	0.06	0.08	0.06	0.03	0.03	0.05	0.04
229	11.59	0.93	0.00	0	1.24	0.72	0.60	0.56	0.38	0.23	0.08	0.68	0.04
230	21.83	1.35	0.00	0	2.17	0.96	0.96	0.84	0.76	0.46	0.08	0.60	0.04
231	0.37	0.05	0.00	0	3.31	0.24	0.18	0.12	0.00	0.00	0.04	0.07	0.04
234	14.05	0.20	0.00	0	2.34	0.12	0.06	0.08	0.08	0.05	0.01	0.04	0.04

HAWAII SITE LAUPAHEHIE

YEAR: 1975

STORM JULIAN DAY	STORM LENGTH (HRS)	RAIN - RUNOFF		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HRS)	TIME INTERVAL (MIN) AND INTENSITIES (IN/HRS)	AVG RAINFALL (IN)	CHARGE RAINFALL (IN)	CHARGE RUNOFF (IN)
		RAIN (IN)	RUNOFF (IN)						
236	8.91	0.19	0.00	0	0.25	0.24	0.18	0.16	0.08
237	9.32	0.13	0.00	0	0.39	0.24	0.12	0.09	0.05
238	21.30	0.14	0.00	0	0.52	0.12	0.12	0.08	0.06
240	0.93	0.09	0.00	0	0.46	0.12	0.12	0.10	0.09
241	0.40	0.06	0.00	0	0.55	0.24	0.18	0.09	0.00
242	5.44	1.41	0.00	0	0.43	1.20	1.20	1.08	0.98
245	0.62	0.06	0.00	0	1.57	0.12	0.06	0.08	0.06
250	9.64	0.29	0.00	0	0.06	0.36	0.30	0.28	0.22
251	2.66	0.06	0.00	0	0.29	0.12	0.06	0.04	0.00
251	5.31	0.18	0.00	0	0.35	0.36	0.30	0.28	0.04
252	5.63	0.23	0.00	0	0.53	1.20	0.72	0.48	0.26
258	36.28	1.24	0.00	0	0.00	0.48	0.42	0.36	0.28
259	2.39	0.06	0.00	0	1.24	0.00	0.00	0.04	0.02
262	0.55	0.09	0.00	0	1.30	0.24	0.18	0.18	0.13
263	1.93	0.07	0.00	0	1.49	0.24	0.18	0.20	0.12
266	0.09	0.04	0.00	0	0.17	0.36	0.00	0.00	0.00
268	5.34	0.06	0.00	0	0.12	0.00	0.00	0.00	0.00
269	4.71	0.18	0.00	0	0.11	0.36	0.30	0.20	0.10
270	4.51	0.04	0.00	0	0.29	0.00	0.00	0.00	0.00
275	14.27	0.19	0.00	0	0.04	0.12	0.12	0.08	0.05
277	5.58	0.29	0.00	0	0.19	0.24	0.12	0.16	0.14
279	6.00	0.15	0.00	0	0.48	0.00	0.00	0.00	0.05
280	14.94	0.77	0.00	0	0.63	0.24	0.24	0.24	0.16
296	0.17	0.09	0.00	0	0.00	0.36	0.26	0.00	0.00
298	2.23	0.28	0.00	0	0.09	0.36	0.36	0.28	0.26
299	9.36	0.19	0.00	0	0.37	0.36	0.12	0.20	0.04
325	5.13	0.27	0.00	0	0.00	0.60	0.54	0.12	0.06
327	1.51	0.17	0.00	0	0.27	0.36	0.30	0.32	0.24
328	13.11	0.41	0.00	0	0.44	0.36	0.30	0.28	0.20
329	1.59	0.05	0.00	0	0.85	0.18	0.00	0.00	0.00
331	2.00	0.22	0.00	0	0.63	0.36	0.24	0.24	0.18
332	6.35	0.15	0.00	0	0.84	0.24	0.18	0.12	0.08
334	9.38	0.20	0.00	0	0.41	0.24	0.18	0.16	0.10
336	0.05	0.03	0.00	0	0.57	0.18	0.00	0.00	0.00
337	17.69	1.00	0.00	0	0.38	0.72	0.72	0.56	0.50
339	9.88	0.05	0.00	0	1.23	0.00	0.00	0.00	0.00
340	12.21	0.48	0.00	0	1.07	0.24	0.18	0.16	0.13
343	5.50	0.15	0.00	0	0.53	0.24	0.18	0.16	0.08

HAWAII SITE: LAUFAHOEHE

YEAR: 1975

STORM JULIAN DAY	STORM LENGTH (HRS)	RAIN		--RUNOFF--		MOISTURE (IN)	MAXIMUM TIME INTERVAL (MIN)	INTENSITIES (IN/HR)	AVG. TIME INTERVAL (MIN)	EFFICIENCY (%)	EFFICIENCY (%)
		IN	IN	IN	IN						
348	4.76	0.30	0.00	0	0	0.15	0.36	0.36	0.22	0.06	0.07
349	12.65	0.43	0.00	0	0	0.30	0.24	0.24	0.16	0.08	0.08
361	16.04	0.76	0.00	0	0	0.00	0.36	0.36	0.28	0.10	0.10
365	1.71	1.20	0.00	0	0.76	2.76	2.76	2.12	1.16	0.63	0.70

HAWAII SITE: LAUPAHOEHOE

YEAR: 1976

STORM DAY	JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES			CLOUD NO.	CLOUD TYPE
							5	10	15		
1	4.46	0.22	0.00	0	0.00	0.24	0.18	0.24	0.14	99	0
2	30.54	1.73	0.00	0	0.22	1.20	0.84	0.72	0.50	54	5
4	32.69	5.09	0.00	0	1.95	2.52	1.50	1.24	1.14	28	4
6	32.00	7.83	0.00	0	7.03	1.92	1.62	1.44	1.03	20	4
8	5.86	0.06	0.00	0	12.92	0.05	0.00	0.00	0.00	0.01	4
9	2.82	0.29	0.00	0	12.98	0.48	0.40	0.22	0.15	0.10	4
10	1.85	0.12	0.00	0	8.18	0.24	0.18	0.16	0.12	0.09	4
12	5.54	0.62	0.00	0	0.47	0.84	0.72	0.64	0.48	0.30	4
12	16.86	1.24	0.00	0	1.09	1.56	1.20	1.12	0.78	0.40	4
16	3.67	1.08	0.00	0	1.86	1.20	1.08	0.96	0.82	0.76	4
16	22.70	2.72	0.00	0	2.94	1.20	1.20	1.04	0.92	0.85	4
18	0.84	0.04	0.00	0	3.80	0.00	0.09	0.00	0.00	0.04	4
20	17.23	0.19	0.00	0	3.84	0.12	0.06	0.04	0.06	0.05	4
22	0.66	0.03	0.00	0	0.23	0.00	0.00	0.00	0.00	0.04	4
23	1.63	0.50	0.00	0	0.25	0.72	0.60	0.52	0.50	0.41	4
28	7.17	0.22	0.00	0	0.50	0.36	0.36	0.28	0.18	0.14	4
31	20.22	0.75	0.09	13	0.22	0.36	0.30	0.28	0.22	0.20	4
37	14.98	2.51	0.34	13	0.00	1.44	1.32	1.16	0.94	0.67	4
44	27.96	1.36	0.00	0	0.00	0.72	0.72	0.52	0.28	0.21	4
46	21.76	1.68	0.13	8	1.36	2.28	1.80	1.40	0.76	0.39	4
47	14.44	0.82	0.00	0	3.04	0.72	0.42	0.32	0.30	0.17	4
47	23.22	2.12	0.12	6	3.86	0.96	0.96	0.80	0.50	0.29	4
50	0.36	0.05	0.00	0	4.62	0.24	0.12	0.12	0.00	0.00	4
51	9.75	0.45	0.00	0	4.67	0.48	0.42	0.36	0.26	0.22	4
52	10.50	1.24	0.11	9	0.50	0.96	0.96	0.76	0.54	0.34	4
53	46.97	5.92	0.43	7	1.74	1.80	1.80	1.60	0.96	0.62	4
55	3.55	0.15	0.00	0	7.66	0.24	0.24	0.20	0.08	0.04	4
55	15.11	2.97	0.26	9	7.76	0.96	0.90	0.84	0.52	0.43	4
57	7.44	0.28	0.00	0	10.73	0.24	0.24	0.20	0.14	0.11	4
59	3.93	0.66	0.02	2	3.40	0.84	0.78	0.76	0.54	0.28	4
60	4.34	1.91	0.06	3	4.06	3.36	2.76	2.52	1.62	0.44	4
62	20.52	5.87	0.46	8	2.85	1.56	1.26	1.08	0.88	0.68	4
63	12.34	0.36	0.00	0	8.44	0.36	0.36	0.32	0.16	0.12	4
64	9.32	0.69	0.05	7	8.79	0.60	0.54	0.52	0.42	0.27	4
65	19.51	0.73	0.03	3	8.82	0.36	0.30	0.32	0.22	0.14	4
66	18.80	2.55	0.23	9	7.64	1.20	1.20	1.00	0.74	0.63	4
67	19.32	0.12	0.00	0	10.19	0.24	0.18	0.16	0.08	0.04	4
68	17.87	0.45	0.00	0	4.45	0.36	0.36	0.32	0.22	0.03	4

HAWAII SITE: LAIPAHOEHE

YEAR: 1977b

STORM JULIAN DAY	LENGTH (HRS)	RAIN --RUNOFF--		ANT. MOISTURE		INTERVAL MAXIMUM RAINFALL INTENSITIES (MM/HOUR)		AVG. INTERV. RAINFALL (MM/HOUR)		FREQUENCIES INDEX		FREQUENCIES INDEX	
		RAIN (MM)	RUNOFF (MM)	RAIN (MM)	MOISTURE (%)	INTERV. MAX. INTEN. (MM)	INTERV. MAX. (MM)	INTERV. MAX. (MM)	INTERV. MAX. (MM)	INTERV. MAX. (MM)	INTERV. MAX. (MM)	INTERV. MAX. (MM)	INTERV. MAX. (MM)
69	13.43	1.09	0.12	1.1	4.54	0.43	0.42	0.40	0.38	0.26	0.08	0.00	0.00
70	22.22	1.03	0.07	0	4.94	0.96	0.96	0.60	0.45	0.05	1.95	0.00	0.00
71	28.00	0.83	0.05	6	5.24	0.24	0.24	0.24	0.22	0.20	0.03	0.04	0.00
76	27.78	2.83	0.33	12	0.83	1.92	1.74	1.44	1.09	0.70	0.11	0.52	0.00
77	14.05	0.87	0.06	7	2.83	0.72	0.64	0.64	0.47	0.02	0.41	0.00	0.00
81	22.44	0.30	0.00	0	3.70	0.24	0.18	0.12	0.10	0.05	0.01	0.00	0.00
84	11.36	0.49	0.00	0	0.50	0.48	0.48	0.36	0.18	0.14	0.04	0.00	0.00
85	5.32	0.08	0.00	0	0.78	0.12	0.06	0.04	0.04	0.02	0.00	0.00	0.00
85	43.60	4.42	0.54	12	0.87	1.32	0.84	0.76	0.62	0.47	0.11	0.2	0.00
87	19.84	1.05	0.06	6	4.99	0.48	0.42	0.28	0.26	0.24	0.05	0.05	0.00
89	25.16	2.02	0.12	6	6.04	2.64	2.10	1.72	1.06	0.56	0.09	6.4	0.00
91	10.91	2.82	0.25	9	3.07	2.16	2.04	1.96	1.62	1.10	0.30	0.39	0.00
92	19.52	0.30	0.00	0	5.89	0.36	0.18	0.16	0.10	0.07	0.02	0.02	0.00
93	8.34	0.31	0.00	0	5.14	0.60	0.36	0.32	0.16	0.14	0.04	0.04	0.00
94	13.80	1.61	0.12	8	5.44	2.64	1.86	1.34	0.80	0.57	0.13	7.1	0.00
95	2.56	0.07	0.00	0	5.03	0.24	0.06	0.04	0.06	0.00	0.00	0.00	0.00
96	14.52	0.53	0.04	7	5.11	0.96	0.64	0.44	0.24	0.23	0.04	0.03	0.00
98	11.50	0.06	0.00	0	2.53	0.12	0.09	0.09	0.00	0.00	0.01	0.01	0.00
100	27.26	6.07	0.63	10	0.67	0.13	0.24	0.12	0.10	0.08	0.05	0.05	0.00
102	6.60	0.17	0.00	0	6.24	0.13	0.00	0.00	0.00	0.00	0.01	0.01	0.00
104	3.09	0.15	0.00	0	6.32	0.32	0.24	0.13	0.00	0.00	0.00	0.00	0.00
106	16.78	0.08	0.00	0	0.24	0.24	0.02	0.00	0.00	0.00	0.01	0.01	0.00
109	8.74	0.58	0.02	3	0.24	0.60	0.42	0.40	0.38	0.24	0.06	0.06	0.00
110	14.22	0.34	0.00	0	0.47	0.47	0.35	0.35	0.24	0.16	0.09	0.09	0.00
110	27.80	1.30	0.07	6	1.01	0.96	0.54	0.40	0.27	0.21	0.07	0.07	0.00
112	21.16	1.48	0.21	14	0.23	0.23	1.08	1.02	0.96	0.54	0.07	0.07	0.00
113	12.85	1.38	0.14	19	3.71	0.99	0.46	0.46	0.40	0.40	0.14	0.14	0.00
114	10.91	0.41	0.03	0	1.11	1.11	0.79	0.79	0.74	0.74	0.04	0.04	0.00
118	4.66	0.11	0.00	0	0.22	0.52	0.21	0.18	0.06	0.04	0.00	0.00	0.00
120	14.16	2.40	0.22	9	0.11	1.92	1.51	1.50	1.44	1.44	0.21	0.21	0.00
121	28.52	6.09	0.52	8	0.21	0.52	0.46	0.46	0.40	0.40	0.07	0.07	0.00
122	1.40	0.05	0.00	0	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
123	14.41	0.09	0.00	0	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
124	1.51	0.04	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128	34.49	0.13	0.00	0	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	2.05	0.05	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132	2.09	0.33	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133	15.28	0.57	0.00	0	0.51	0.48	0.48	0.48	0.48	0.48	0.00	0.00	0.00

HAWAII SITE: LAUFAHEDOE

YEAR: 1976

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (%)	MAXIMUM RAINFALL INTENSITIES (IN/Hr)			TIME INTERVAL (MIN) AND CLOUD FUSION INDEX			CLOUD NO	CLOUD CODE
					5	10	15	30	60	INT		
139	4.24	0.04	0.00	0	0.00	0.00	0.04	0.02	0.01	0.01	96	4
140	11.97	0.36	0.00	0	0.04	0.36	0.30	0.20	0.14	0.10	95	4
141	10.13	0.62	0.06	?	0.40	0.60	0.42	0.36	0.20	0.17	97	4
142	19.94	0.69	0.06	10	1.02	0.84	0.84	0.76	0.48	0.24	96	4
143	9.47	0.33	0.03	8	1.71	0.36	0.30	0.20	0.16	0.09	92	4
144	1.96	0.03	0.00	0	2.04	0.00	0.00	0.00	0.00	0.02	96	0
145	5.14	0.18	0.00	0	1.67	0.24	0.18	0.16	0.10	0.07	94	4
146	16.56	0.39	0.00	0	1.24	0.60	0.36	0.24	0.20	0.11	92	4
147	9.31	0.08	0.00	0	0.94	0.12	0.06	0.08	0.06	0.03	96	0
148	15.0	22.59	0.12	0	0.66	0.04	0.00	0.00	0.02	0.01	94	0
158	26.12	0.31	0.00	0	0.00	0.12	0.12	0.12	0.06	0.05	91	4
162	0.23	0.03	0.00	0	0.31	0.00	0.00	0.00	0.00	0.03	93	4
165	27.12	0.22	0.00	0	0.03	0.12	0.12	0.08	0.06	0.05	90	0
167	13.93	0.06	0.00	0	0.25	0.00	0.00	0.00	0.00	0.00	97	0
169	33.53	0.34	0.00	0	0.29	0.24	0.18	0.16	0.12	0.10	95	0
171	26.96	0.90	0.04	4	0.41	0.48	0.36	0.28	0.26	0.21	93	4
173	10.59	0.09	0.00	0	1.24	0.36	0.24	0.04	0.02	0.01	96	0
176	16.51	0.09	0.00	0	0.99	0.00	0.06	0.04	0.02	0.01	96	0
177	8.38	0.30	0.00	0	0.18	0.24	0.24	0.20	0.15	0.04	87	0
178	23.67	0.47	0.00	0	0.48	0.36	0.24	0.16	0.14	0.11	91	0
180	19.48	0.29	0.00	0	0.86	0.24	0.12	0.08	0.06	0.04	97	0
181	26.86	0.23	0.00	0	1.15	0.12	0.12	0.08	0.06	0.03	90	0
184	6.40	0.04	0.00	0	0.52	0.00	0.00	0.00	0.02	0.01	98	0
185	18.98	0.15	0.00	0	0.56	0.19	0.06	0.08	0.04	0.02	93	0
188	8.09	0.60	0.00	0	0.18	0.24	0.24	0.18	0.16	0.07	77	0
189	20.76	1.91	0.00	0	0.78	0.36	0.36	0.32	0.26	0.19	54	0
190	23.22	0.53	0.00	0	2.66	0.24	0.18	0.16	0.10	0.09	79	0
193	24.86	0.20	0.00	0	3.04	0.12	0.08	0.08	0.05	0.03	91	0
195	13.94	0.24	0.00	0	0.73	0.24	0.18	0.16	0.10	0.09	99	0
196	14.03	1.20	0.00	0	0.44	1.08	1.08	0.88	0.70	0.61	63	0
201	1.95	0.04	0.00	0	1.20	0.00	0.00	0.00	0.02	0.01	92	0
202	25.15	1.48	0.00	0	0.04	0.48	0.30	0.32	0.19	0.06	57	1
204	4.38	0.09	0.00	0	1.52	0.12	0.06	0.04	0.03	0.02	95	0
205	17.09	0.70	0.00	0	1.61	0.36	0.30	0.24	0.18	0.12	0	4
211	1.58	0.06	0.00	0	0.00	0.00	0.00	0.05	0.02	0.03	97	0
218	14.35	0.12	0.00	0	0.12	0.36	0.30	0.28	0.18	0.12	94	0
220	6.70	0.28	0.00	0	0.28	0.36	0.30	0.20	0.12	0.09	68	0
224	26.22	0.49	0.00	0	0.28	0.36	0.30	0.20	0.12	0.09	60	0

HAWAII SITE: LAUFAHEDOE

YEAR: 1975

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES
(IN./HR.)

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)		--RUNOFF-- MOISTURE (%)		TIME INTERVAL (MIN)	MAXIMUM RAINFALL (IN./HR.)	INTENSIVE FLOODING INDEX	INTENSIVE FLOODING INDEX
		5	10	15	30				
225	4.85	0.10	0.00	0	0.77	0.00	0.06	0.12	0.04
226	3.47	0.14	0.00	0	0.59	0.36	0.30	0.20	0.10
228	14.13	0.21	0.00	0	0.73	0.24	0.24	0.16	0.04
232	32.73	4.52	0.34	7	0.21	2.28	1.86	1.60	1.42
238	2.77	0.07	0.00	0	0.00	0.12	0.06	0.08	0.11
239	8.08	0.20	0.00	0	0.07	0.60	0.36	0.28	0.16
240	11.19	3.26	0.67	21	0.28	1.80	1.80	1.60	1.36
241	10.09	0.38	0.10	27	3.54	0.48	0.42	0.40	0.24
243	0.77	0.09	0.00	0	3.92	0.12	0.12	0.08	0.06
245	9.45	0.13	0.00	0	3.94	0.29	0.12	0.08	0.04
246	17.23	1.11	0.25	23	0.23	0.72	0.72	0.64	0.34
247	7.18	0.31	0.03	9	1.34	0.48	0.42	0.36	0.20
249	17.06	0.09	0.00	0	1.55	0.24	0.18	0.12	0.08
253	6.41	0.08	0.00	0	0.09	0.00	0.00	0.08	0.04
254	16.30	0.38	0.00	0	0.18	0.48	0.42	0.40	0.32
256	2.63	0.04	0.00	0	0.47	0.12	0.06	0.04	0.02
258	11.13	0.07	0.00	0	0.51	0.12	0.06	0.08	0.06
261	4.70	0.21	0.00	0	0.11	0.24	0.18	0.16	0.08
270	16.44	0.41	0.00	0	0.00	0.36	0.30	0.28	0.20
272	0.97	0.17	0.00	0	0.41	0.36	0.36	0.24	0.09
274	0.06	0.02	0.00	0	0.58	0.16	0.00	0.00	0.03
279	18.98	0.55	0.00	0	0.02	0.36	0.30	0.28	0.20
281	25.25	1.85	0.13	7	0.55	1.68	1.26	1.00	0.72
283	39.12	1.88	0.00	0	2.40	0.72	0.60	0.48	0.30
285	22.29	0.31	0.00	0	3.73	0.12	0.12	0.10	0.08
288	0.17	0.02	0.00	0	2.19	0.00	0.07	0.00	0.00
289	18.95	1.27	0.08	6	0.33	0.48	0.42	0.40	0.32
290	20.64	0.46	0.00	0	1.60	0.36	0.36	0.28	0.21
292	0.05	0.03	0.00	0	1.75	0.16	0.00	0.00	0.00
293	10.56	0.86	0.09	11	1.78	0.72	0.66	0.64	0.54
295	12.67	1.88	0.33	18	1.36	1.32	1.26	1.20	1.06
298	17.06	0.34	0.00	0	2.74	0.36	0.36	0.32	0.22
299	9.84	0.23	0.00	0	2.22	0.96	0.48	0.36	0.22
300	30.83	1.38	0.24	18	2.45	0.72	0.66	0.60	0.48
303	10.29	0.16	0.00	0	1.94	0.12	0.06	0.08	0.06
305	14.19	0.16	0.00	0	1.54	0.12	0.06	0.08	0.04
307	17.85	2.43	0.75	31	0.32	0.96	0.84	0.76	0.48
310	32.81	0.90	0.11	13	2.59	0.84	0.72	0.60	0.33

HAWAII SITE: LAUFAHEHOE

YEAR: 1975

TIME INTERVAL (MIN) (MM)

STORM JULIAN DAY	LENGTH (HRS)	RAIN - RUNOFF		ANT MOISTURE		MAXIMUM RAINFALL (IN/MM)		EVAP. (MM/H)		EVAP. (MM/H)	
		(IN)	(IN)	(IN)	(IN)	5	10	15	30	50	100
312	2.67	0.08	0.00	0	0	3.33	0.13	0.12	0.02	0.01	0.02
313	6.0	3.4	1.2	2.6	4.08	33	0.98	1.20	1.08	0.86	0.72
317	0.37	0.03	0.00	0	0	1.2	34	0.99	0.00	0.00	0.08
318	0.05	0.03	0.00	0	0	1.2	29	0.16	0.00	0.00	0.00
321	34.05	5.09	1.56	31	0.06	0	6.0	0.60	0.60	0.54	0.47
322	10.96	0.15	0.00	0	0	5	16	0.24	0.12	0.08	0.06
324	27.16	0.09	0.00	0	0	5	25	0.00	0.00	0.00	0.00
325	12.97	0.99	0.23	23	5	34	0.84	0.78	0.60	0.42	0.25
327	9.35	0.30	0.00	0	1	23	0	24	0.12	0.12	0.06
331	10.73	0.31	0.00	0	0	30	0	30	0.24	0.18	0.16
332	16.68	0.44	0.00	0	0	6.1	0	24	0.24	0.16	0.12
334	9.30	0.09	0.00	0	0	74	0	12	0.06	0.04	0.02
339	10.07	0.34	0.00	0	0	0.09	0	36	0.24	0.16	0.14
341	18.00	0.81	0.00	0	0	34	0	60	0.48	0.48	0.46
342	20.87	1.84	0.16	9	1.14	0	96	0.99	0.76	0.48	0.26
345	10.20	1.00	0.24	24	2.64	0	84	0.78	0.72	0.66	0.42
346	10.67	0.68	0.13	19	3	64	0	96	0.96	0.64	0.32
350	16.68	3.03	0.66	22	1.68	2	28	1.86	1.68	1.20	0.79
355	0.10	0.03	0.00	0	3	0.03	0	0.00	0.00	0.00	0.00
358	2.05	0.05	0.00	0	0	0.03	0	12	0.06	0.04	0.03
359	16.41	0.55	0.00	0	0	0.08	0	36	0.30	0.28	0.20
361	14.76	1.90	0.59	31	0	60	0	72	0.66	0.64	0.46
363	8.07	0.08	0.00	0	2	51	0	12	0.06	0.04	0.02
364	8.25	0.50	0.09	19	2	54	0	48	0.42	0.36	0.27
366	0.09	0.03	0.00	0	2	49	0	24	0	0.00	0.00

HAWAII SITE: LAUPAHEDE

YEAR: 1977 TIME INTERVAL (MIN) AND

ANT. MAXIMUM RAINFALL INTENSITIES

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	MOISTURE (IN)	5	10	15	30	60	1H1	NO. OF CUPS
2	1. 22	0. 06	0. 00	0. 00	0. 00	0. 04	0. 02	0. 01	0. 05	97	0
21	4. 53	0. 09	0. 00	0. 00	0. 00	0. 06	0. 04	0. 03	0. 02	96	0
28	20. 58	1. 28	0. 09	0. 00	0. 60	0. 54	0. 56	0. 50	0. 44	95	4
29	6. 20	0. 21	0. 00	0	1. 28	0. 24	0. 24	0. 18	0. 16	94	6
33	22. 40	2. 66	0. 72	27	1. 49	0. 96	0. 90	0. 76	0. 68	93	14
36	12. 71	0. 46	0. 00	0	2. 66	0. 84	0. 60	0. 44	0. 18	92	13
46	7. 22	0. 21	0. 00	0	0. 00	0. 24	0. 18	0. 16	0. 14	91	0
53	20. 54	0. 15	0. 00	0	0. 00	0. 14	0. 06	0. 08	0. 04	90	0
55	4. 43	0. 47	0. 00	0	0. 15	1. 32	0. 66	0. 48	0. 30	89	0
56	4. 92	0. 05	0. 00	0	0. 62	0. 24	0. 12	0. 08	0. 04	88	0
57	22. 37	4. 42	1. 02	23	0. 67	1. 32	1. 20	1. 00	0. 72	87	2
59	11. 78	1. 09	0. 28	26	4. 94	0. 72	0. 60	0. 56	0. 48	86	2
59	20. 15	1. 15	0. 00	0	6. 03	0. 72	0. 48	0. 36	0. 24	85	2
60	14. 69	0. 67	0. 00	0	7. 17	0. 24	0. 36	0. 24	0. 18	84	1
61	33. 96	5. 30	0. 00	0	7. 38	1. 68	1. 26	1. 12	0. 74	83	2
62	22. 15	1. 26	0. 24	19	12. 62	1. 68	0. 96	0. 68	0. 34	82	2
64	23. 62	0. 73	0. 03	4	9. 47	0. 84	0. 42	0. 28	0. 14	81	1
65	17. 29	0. 52	0. 00	0	7. 97	0. 48	0. 30	0. 24	0. 16	80	1
66	16. 42	0. 81	0. 05	7	7. 82	0. 60	0. 48	0. 32	0. 22	79	1
67	22. 85	0. 16	0. 00	0	3. 33	0. 24	0. 24	0. 24	0. 12	78	1
68	5. 02	0. 08	0. 00	0	2. 23	0. 24	0. 12	0. 08	0. 04	77	1
69	5. 92	0. 49	0. 03	6	2. 31	0. 84	0. 66	0. 60	0. 48	76	1
70	26. 52	1. 63	0. 46	28	2. 07	0. 96	0. 84	0. 72	0. 60	75	1
71	4. 35	0. 16	0. 00	0	3. 18	0. 36	0. 18	0. 16	0. 13	74	1
72	34. 29	6. 28	2. 01	32	2. 52	1. 20	1. 08	0. 96	0. 77	73	1
73	15. 58	1. 02	0. 46	45	6. 64	0. 84	0. 78	0. 64	0. 52	72	1
74	9. 62	0. 38	0. 05	14	9. 58	0. 48	0. 42	0. 32	0. 18	71	1
75	15. 35	0. 21	0. 00	0	9. 47	0. 24	0. 12	0. 08	0. 05	70	1
76	25. 18	1. 45	0. 40	28	8. 05	1. 08	1. 02	0. 96	0. 44	69	1
77	10. 57	0. 36	0. 04	11	9. 34	0. 48	0. 30	0. 28	0. 13	68	1
78	25. 82	2. 89	0. 94	32	3. 43	2. 64	1. 92	1. 60	0. 92	67	1
79	13. 30	1. 37	0. 37	27	5. 30	1. 20	1. 02	0. 76	0. 54	66	1
80	17. 65	1. 39	0. 42	30	6. 29	2. 04	1. 14	0. 84	0. 46	65	1
81	23. 59	0. 97	0. 18	18	7. 46	0. 48	0. 42	0. 44	0. 26	64	1
82	12. 81	0. 75	0. 32	43	6. 98	0. 60	0. 54	0. 52	0. 34	63	1
83	12. 19	0. 27	0. 00	0	7. 37	0. 48	0. 42	0. 36	0. 20	62	1
86	0. 15	0. 06	0. 00	0	1. 99	0. 24	0. 00	0. 00	0. 00	61	1
87	5. 35	0. 67	0. 07	11	1. 07	0. 96	0. 90	0. 80	0. 54	60	1

HAWAII SITE: LAUPAHEHIE

YEAR: 1977

TIME INTERVAL (MIN) AND

MAXIMUM RAINFALL INTENSITIES

STORM DAY	JULIAN LENGTH (HRS)	RAIN		--RUNOFF--		MOISTURE (IN)	CURVE NO.	Erosion Rate (in/hr.)
		(IN)	(IN)	(%)	(IN)			
88	5.35	0.15	0.00	0	0.99	0.36	93	0
91	6.73	1.64	0.62	38	0.88	1.04	1.76	0.96
93	5.18	0.66	0.13	19	1.79	0.84	0.78	0.64
94	67.86	6.99	2.58	37	2.30	0.96	0.90	0.56
114	21.75	0.56	0.15	26	0.00	0.84	0.78	0.52
117	4.38	0.14	0.00	0	0.56	0.24	0.18	0.12
126	1.75	0.05	0.00	0	0.00	0.00	0.04	0.02
126	16.62	0.55	0.00	0	0.05	0.36	0.30	0.20
131	3.23	0.09	0.00	0	0.60	0.12	0.12	0.06
133	10.12	0.29	0.00	0	0.09	0.36	0.36	0.22
137	10.78	3.41	0.69	20	0.29	3.00	2.52	2.29
140	12.70	0.08	0.00	0	3.41	0.00	0.09	0.04
141	3.66	0.13	0.00	0	3.50	0.24	0.18	0.12
141	24.78	1.72	0.50	27	3.62	0.60	0.60	0.52
143	19.63	0.21	0.00	0	1.93	0.36	0.36	0.28
144	7.82	0.14	0.00	0	2.14	0.12	0.18	0.16
145	14.21	0.13	0.00	0	2.28	0.24	0.18	0.16
146	1.55	0.09	0.00	0	2.33	0.00	0.06	0.04
148	12.52	0.16	0.00	0	2.58	0.12	0.12	0.08
150	6.85	0.06	0.00	0	3.00	0.00	0.00	0.02
151	2.59	0.05	0.00	0	3.01	0.00	0.06	0.04
152	9.84	0.04	0.00	0	2.77	0.00	0.00	0.00
155	5.84	0.06	0.00	0	1.15	0.12	0.06	0.04
157	7.56	0.21	0.00	0	0.10	0.24	0.18	0.14
162	20.54	0.12	0.00	0	0.21	0.00	0.04	0.02
165	5.59	0.08	0.00	0	0.12	0.12	0.06	0.08
168	6.18	0.15	0.00	0	0.08	0.12	0.08	0.06
170	17.40	0.39	0.00	0	0.24	0.36	0.24	0.24
171	3.16	0.06	0.00	0	0.55	0.12	0.12	0.08
172	1.66	0.05	0.00	0	0.61	0.00	0.00	0.02
173	9.78	0.36	0.00	0	0.66	0.36	0.24	0.24
181	18.40	0.10	0.00	0	0.25	0.00	0.00	0.02
176	4.23	0.11	0.00	0	0.47	0.24	0.12	0.04
177	4.31	0.08	0.00	0	0.51	0.24	0.12	0.08
180	11.88	0.05	0.00	0	0.19	0.00	0.00	0.00
184	7.86	0.41	0.00	0	0.16	0.72	0.66	0.56
184	26.19	0.43	0.00	0	0.56	0.24	0.18	0.12
186	12.51	2.03	0.19	9	0.94	2.28	1.56	1.36

HAWAII SITE: LAUPAHOEHOE

YEAR: 1977 TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES
(IN/HR)

STORM DAY	JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	MOISTURE (IN)	ANT. TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)						
						5	10	15	30	60	Avg INT	INT NO
188	7.13	0.49	0.00	0	2.87	0.24	0.24	0.20	0.16	0.14	0.06	80
188	11.81	0.93	0.05	5	3.35	0.48	0.42	0.40	0.30	0.24	0.07	79
189	6.83	0.67	0.10	15	4.28	0.96	0.78	0.72	0.56	0.28	0.69	80
190	14.09	0.25	0.00	0	4.11	0.36	0.24	0.20	0.12	0.09	0.03	69
191	13.25	0.73	0.00	0	4.36	0.36	0.36	0.32	0.18	0.12	0.06	74
192	22.34	0.32	0.00	0	3.06	0.12	0.12	0.12	0.12	0.09	0.01	62
193	7.14	0.28	0.00	0	3.38	0.24	0.18	0.16	0.10	0.07	0.04	63
195	5.41	0.44	0.00	0	4.58	0.24	0.18	0.16	0.14	0.12	0.05	67
197	3.76	0.06	0.00	0	1.04	0.24	0.09	0.09	0.09	0.04	0.03	67
198	23.67	2.08	0.24	12	0.78	0.96	0.78	0.60	0.38	0.28	0.08	69
199	5.89	0.39	0.00	0	2.59	0.24	0.24	0.24	0.20	0.14	0.06	74
200	15.24	0.46	0.00	0	2.96	0.24	0.18	0.16	0.16	0.10	0.03	71
201	15.05	0.12	0.00	0	2.98	0.12	0.12	0.12	0.08	0.06	0.00	69
202	20.64	0.81	0.00	0	3.11	0.24	0.18	0.16	0.16	0.15	0.04	71
203	7.47	0.07	0.00	0	3.86	0.09	0.09	0.09	0.09	0.08	0.01	96
206	9.39	0.42	0.00	0	1.01	0.84	0.60	0.44	0.38	0.22	0.04	83
212	4.57	0.07	0.00	0	0.69	0.12	0.12	0.08	0.08	0.04	0.07	93
212	14.51	0.65	0.00	0	0.67	0.36	0.30	0.28	0.18	0.13	0.04	74
213	6.93	0.07	0.00	0	0.73	0.00	0.00	0.04	0.04	0.03	0.01	73
214	17.72	3.82	0.93	24	0.80	1.20	0.96	0.84	0.72	0.61	0.35	64
216	6.26	0.23	0.00	0	4.62	0.36	0.24	0.26	0.14	0.09	0.04	69
217	5.42	0.06	0.00	0	4.86	0.07	0.06	0.04	0.02	0.01	0.01	67
218	21.54	3.76	0.94	25	4.20	1.44	1.32	1.12	0.86	0.55	0.17	65
219	11.11	0.12	0.00	0	7.88	0.00	0.00	0.08	0.04	0.03	0.01	79
229	4.13	0.08	0.00	0	0.00	0.00	0.00	0.06	0.06	0.04	0.02	66
231	18.46	0.09	0.00	0	0.08	0.00	0.05	0.04	0.02	0.01	0.01	94
233	32.83	1.00	0.00	0	0.17	0.34	0.24	0.24	0.24	0.24	0.05	71
234	19.62	0.78	0.00	0	1.17	0.48	0.42	0.32	0.28	0.24	0.01	78
236	6.05	0.23	0.00	0	1.87	0.36	0.36	0.36	0.24	0.24	0.04	73
239	9.75	0.29	0.00	0	1.01	0.12	0.12	0.12	0.10	0.07	0.03	67
240	21.16	0.56	0.00	0	0.52	0.34	0.34	0.34	0.28	0.18	0.09	69
241	10.48	0.14	0.00	0	1.08	0.08	0.08	0.08	0.08	0.04	0.02	65
242	22.00	0.41	0.00	0	1.01	0.24	0.18	0.16	0.14	0.09	0.02	68
245	4.99	0.09	0.00	0	1.13	0.24	0.12	0.12	0.08	0.04	0.01	71
246	11.60	0.11	0.00	0	0.65	0.24	0.12	0.08	0.04	0.02	0.01	75
247	13.41	0.27	0.00	0	0.62	0.24	0.18	0.12	0.10	0.06	0.01	78
250	8.45	0.24	0.00	0	0.47	0.24	0.12	0.08	0.06	0.02	0.01	71
251	4.83	0.11	0.00	0	0.62	0.12	0.06	0.06	0.05	0.03	0.01	71

HAWAII SITE: LAUFAHOEHOE

YEAR: 1977

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (%)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/Hr)			CLOUD, PRECIPITATION TYPE	DATE NO.
					5	10	15		
253	7.03	0.29	0.00	0	0.35	0.12	0.12	0.10	0.04
254	4.71	0.10	0.00	0	0.64	0.12	0.12	0.08	0.02
256	8.34	0.06	0.00	0	0.50	0.00	0.06	0.04	0.01
258	7.44	0.07	0.00	0	0.45	0.12	0.06	0.04	0.01
259	8.93	0.29	0.00	0	0.24	0.36	0.20	0.24	0.03
260	3.25	0.07	0.00	0	0.43	0.12	0.06	0.04	0.02
265	2.37	0.24	0.00	0	0.07	0.60	0.60	0.44	0.10
265	8.09	0.17	0.00	0	0.24	0.60	0.36	0.24	0.02
267	6.83	0.38	0.00	0	0.41	0.36	0.18	0.16	0.14
269	3.44	0.04	0.00	0	0.79	0.00	0.00	0.02	0.01
270	2.45	0.04	0.00	0	0.83	0.00	0.00	0.00	0.02
275	17.32	0.21	0.00	0	0.04	0.12	0.12	0.10	0.07
276	9.45	0.11	0.00	0	0.21	0.24	0.00	0.08	0.02
277	6.14	0.27	0.00	0	0.32	0.36	0.24	0.20	0.08
279	5.25	0.30	0.00	0	0.59	0.36	0.30	0.24	0.13
280	6.74	0.32	0.00	0	0.89	0.48	0.24	0.24	0.05
283	5.09	0.44	0.01	1	0.62	0.60	0.60	0.52	0.32
289	3.09	0.10	0.00	0	0.44	0.24	0.12	0.08	0.06
289	9.92	1.71	0.58	34	0.10	1.32	1.14	0.92	0.66
290	7.37	0.71	0.19	26	1.81	0.48	0.42	0.44	0.34
291	1.83	0.07	0.00	0	2.52	0.24	0.12	0.08	0.04
292	10.42	0.07	0.00	0	2.59	0.12	0.11	0.04	0.02
293	0.12	0.03	0.00	0	2.67	0.00	0.00	0.00	0.00
294	17.00	1.55	0.23	15	2.60	0.72	0.72	0.63	0.53
295	6.79	0.43	0.00	0	2.44	0.24	0.24	0.20	0.16
295	15.45	1.26	0.13	11	2.15	0.36	0.30	0.24	0.22
297	6.44	0.50	0.00	0	3.34	0.48	0.42	0.40	0.32
298	1.25	0.12	0.00	0	3.76	0.48	0.42	0.32	0.16
299	9.42	1.62	0.25	15	3.85	0.72	0.66	0.52	0.38
299	14.25	2.85	0.38	13	3.92	0.84	0.78	0.72	0.50
300	12.53	0.67	0.00	0	6.77	0.84	0.48	0.44	0.22
301	23.19	1.28	0.10	8	5.76	0.84	0.78	0.52	0.36
303	10.49	0.17	0.00	0	6.54	0.24	0.18	0.12	0.06
305	14.85	2.03	0.31	15	2.12	1.32	1.02	0.84	0.58
306	9.17	0.10	0.00	0	3.48	0.24	0.12	0.08	0.04
307	10.44	0.94	0.37	39	2.30	0.72	0.66	0.54	0.41
334	0.89	0.29	0.00	0	0.00	0.84	0.72	0.60	0.36
338	21.60	0.63	0.00	0	0.29	0.36	0.34	0.23	0.03

HAWAII SITE: LAUFAHOEHOE

YEAR: 1977

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	RUNOFF (IN)	ANT. MOISTURE (%)	MAXIMUM RAINFALL (IN/HR)			TIME INTERVAL (MIN) AND INTENSITIES			AVG. TNT	CLOUD INDEX NO.	EROSION CODE	
					5	10	15	30	60					
341	1.89	0.04	0.00	0	0.63	0.20	0.00	0.00	0.00	0.02	93	0	4	
348	6.85	0.37	0.00	0	0.00	0.36	0.24	0.16	0.14	0.09	0.05	84	0	4
349	7.68	0.06	0.00	0	0.37	0.24	0.12	0.08	0.04	0.02	0.00	97	0	4
350	7.02	0.11	0.00	0	0.44	0.24	0.18	0.12	0.10	0.05	0.01	95	0	4
350	12.38	1.37	0.15	11	0.54	1.32	1.02	0.84	0.64	0.54	0.12	77	6	4
352	45.17	4.61	0.98	21	1.91	1.20	0.96	0.80	0.62	0.51	0.10	53	20	4
354	20.14	0.20	0.00	0	6.15	0.24	0.24	0.16	0.08	0.05	0.01	91	0	4
355	1.82	0.17	0.00	0	6.29	0.24	0.24	0.20	0.20	0.13	0.09	92	0	4
362	0.36	0.04	0.00	0	0.00	0.11	0.00	0.00	0.00	0.00	0.11	93	0	4
365	30.42	6.83	1.82	27	0.04	1.92	1.86	1.76	1.38	1.23	0.24	53	20	4

HAWAII SITE: HONOKAA

STORM JULIAN DAY	LENGTH (HRS)	RAIN		--TRUNOFF--		ANT. MOISTURE (IN)		MAXIMUM RAINFALL (IN/HF)		TIME INTERVAL (MIN) AND INTENSITIES (IN/HF)		CURVE NO.	EROSION INDEX	EROSION CODE		
		(IN)	(Z)	(IN)	(Z)	(IN)	(Z)	(IN)	(Z)	(IN)	(Z)					
49	17.33	2.80	0.00	0.00	0.00	0.00	0.00	1.20	1.20	0.80	0.80	0.60	0.16	44	3	
56	3.92	1.00	0.00	0.00	0.00	0.00	0.00	1.20	0.60	0.80	0.40	0.30	0.26	69	2	
64	11.25	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.20	0.20	0.20	0.04	82	2	
88	3.17	1.00	0.00	0.00	0.00	0.00	0.00	1.20	1.20	0.80	0.60	0.32	69	5		
89	28.08	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	87	0	
93	1.33	0.20	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.15	91	0	
95	18.75	1.10	0.00	0.00	0.00	0.00	0.00	0.20	1.20	0.60	0.40	0.20	0.20	68	1	
96	5.50	0.40	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.10	85	0	
97	21.58	0.40	0.00	0.00	0.00	0.00	0.00	1.70	0.00	0.00	0.00	0.00	0.03	83	0	
99	3.83	0.50	0.00	0.00	0.00	0.00	0.00	1.90	0.00	0.00	0.00	0.00	0.10	80	0	
99	10.92	1.60	0.00	0.00	0.00	0.00	0.00	2.40	1.20	0.60	0.40	0.20	0.70	0.17	58	2
117	2.33	0.30	W	W	W	W	W	0.00	0.00	0.00	0.00	0.00	0.03	87	0	
120	21.42	0.60	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.03	77	0	
125	5.67	0.70	0.00	0.00	0.00	0.00	0.00	0.60	1.20	0.60	0.40	0.40	0.30	9.15	76	1
126	5.00	0.40	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.40	0.20	0.10	0.08	85	0
128	3.42	0.90	0.00	0.00	0.00	0.00	0.00	1.10	2.40	2.40	1.60	1.00	0.70	0.43	71	0
129	1.00	0.30	0.00	0.00	0.00	0.00	0.00	2.00	1.20	0.60	0.40	0.40	0.20	0.30	87	0
187	9.83	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.02	91	0
188	27.00	0.90	0.00	0.00	0.00	0.00	0.00	0.20	1.20	0.60	0.40	0.40	0.20	0.04	71	2
195	7.17	0.60	0.00	0.00	0.00	0.00	0.00	0.00	1.20	1.20	0.80	0.60	0.40	0.16	74	3
208	9.00	2.10	0.01	0.01	0.00	0.00	0.00	0.00	1.20	0.60	0.80	0.60	0.40	0.25	52	0
208	3.00	0.30	0.00	0.00	0.00	0.00	0.00	2.10	0.00	0.00	0.40	0.20	0.10	0.14	88	0
209	4.17	0.40	0.00	0.00	0.00	0.00	0.00	2.40	0.00	0.00	0.00	0.00	0.10	0.12	65	0
210	32.67	0.20	0.00	0.00	0.00	0.00	0.00	2.80	0.00	0.00	0.00	0.00	0.01	91	0	
223	4.75	0.20	0.00	0.00	0.00	0.00	0.00	4.00	1.20	0.60	0.40	0.40	0.30	0.09	91	0
225	9.83	0.20	0.00	0.00	0.00	0.00	0.00	3.60	0.00	0.00	0.00	0.00	0.02	91	0	
226	9.58	0.90	0.01	0.01	0.00	0.00	0.00	4.00	1.20	0.60	0.40	0.20	0.12	72	1	
230	36.25	3.10	0.01	0.01	0.00	0.00	0.00	1.10	1.20	0.60	0.40	0.40	0.30	43	8	
232	6.83	0.50	0.00	0.00	0.00	0.00	0.00	4.00	1.20	0.60	0.40	0.20	0.10	0.06	77	0
233	3.00	0.40	0.00	0.00	0.00	0.00	0.00	3.60	0.00	0.00	0.00	0.00	0.01	91	0	
241	14.08	1.10	0.00	0.00	0.00	0.00	0.00	1.20	1.20	0.80	0.60	0.40	0.08	67	4	
248	9.25	0.60	W	W	W	W	W	0.00	0.00	0.00	0.00	0.00	0.10	0.06	77	4
273	17.75	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	77	0	
276	20.58	0.60	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.03	77	0	
279	20.92	0.30	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.10	0.01	87	0
338	16.08	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	83	0	

HAWAII SITE: HONOKAA

YEAR: 1973

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES
(IN/HR)

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	-RUNOFF--	ANT. MOISTURE (%)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)	Avg. (IN)	10	15	30	60	IN	NO.	CURVE INDEX	FRICTION COEF. CODE
51	15.75	3.00	0.11	4.0	0.00	1.20	1.20	1.20	0.80	0.60	0.21	51	19	4
54	16.08	0.70	0.06	1.0	3.00	1.20	0.60	0.40	0.20	0.10	0.05	86	0	4
56	46.42	2.90	0.23	8.3	3.70	1.20	1.20	1.20	0.80	0.50	0.06	57	15	4
59	26.92	1.30	0.11	2.9	3.60	1.20	1.20	1.20	0.80	0.40	0.30	76	3	4
62	4.08	0.20	0.02	1.1	1.30	0.00	0.00	0.00	0.00	0.00	0.05	96	0	4
65	6.53	1.10	0.00	0.0	0.20	0.00	0.60	0.40	0.20	0.20	0.17	65	1	4
65	17.67	2.20	0.00	0.0	1.30	1.20	1.20	1.20	0.80	0.40	0.40	48	5	4
74	21.67	1.30	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.10	0.06	64	0	4
75	12.42	1.90	0.00	0.0	1.30	2.40	1.80	1.20	0.60	0.50	0.15	51	7	4
76	3.58	0.50	0.00	0.0	3.20	0.00	0.00	0.00	0.20	0.10	0.14	80	0	4
77	10.75	1.20	0.00	0.0	3.70	0.00	0.60	0.40	0.20	0.20	0.11	63	1	4
79	2.00	0.60	0.00	0.0	4.90	0.00	0.00	0.40	0.20	0.30	0.30	77	0	4
81	27.50	0.30	0.00	0.0	2.30	0.00	0.00	0.00	0.00	0.00	0.01	87	0	4
83	17.17	2.10	0.00	0.0	0.90	0.00	0.60	0.40	0.40	0.30	0.12	49	5	4
86	20.50	0.20	0.00	0.0	2.40	0.00	0.00	0.00	0.00	0.00	0.01	91	0	4
88	6.50	0.30	0.00	0.0	2.30	0.00	0.00	0.00	0.00	0.00	0.06	87	0	4
89	6.75	1.80	0.00	0.0	0.50	1.20	0.60	0.80	0.40	0.40	0.27	53	5	4
94	6.42	2.60	0.00	0.0	1.80	2.40	1.80	1.60	1.20	0.90	0.40	43	25	4
95	24.67	0.20	0.00	0.0	2.60	0.00	0.00	0.00	0.00	0.00	0.00	91	0	4
97	23.17	0.80	0.00	0.0	2.80	0.00	0.00	0.00	0.20	0.10	0.03	71	0	4
99	7.25	1.40	0.00	0.0	3.60	0.00	0.00	0.40	0.20	0.20	0.19	59	1	4
100	6.92	0.30	0.00	0.0	2.40	0.00	0.00	0.00	0.00	0.00	0.04	87	0	4
1117	2.67	0.20	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.07	91	0	4
1223	3.00	0.40	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.13	83	0	4
1322	29.25	0.20	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91	0	4
134	2.75	0.40	0.00	0.0	0.20	0.00	0.00	0.00	0.00	0.10	0.15	83	0	4
136	22.67	0.70	0.00	0.0	0.60	0.00	0.00	0.00	0.00	0.10	0.03	74	0	4
138	16.58	1.00	0.00	0.0	1.30	0.00	0.00	0.00	0.20	0.10	0.06	67	0	4
172	39.33	0.30	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	87	0	4
185	5.42	0.60	0.01	1.0	0.00	1.20	0.60	0.40	0.20	0.20	0.11	80	0	4
187	63.00	0.40	0.00	0.0	0.60	0.00	0.00	0.00	0.00	0.00	0.00	83	0	4
193	5.67	0.20	0.00	0.0	0.40	0.00	0.00	0.00	0.00	0.00	0.04	91	0	4
195	22.75	0.40	0.00	0.0	0.20	0.00	0.00	0.00	0.00	0.00	0.02	85	0	4
220	1.42	0.30	0.01	4.0	0.00	1.20	1.20	0.80	0.40	0.20	1.20	91	0	4
241	5.75	0.30	0.03	1.1	0.00	0.00	0.00	0.00	0.00	0.11	0.11	94	0	4
256	5.25	0.40	0.03	7.0	0.00	0.00	0.60	0.40	0.20	0.10	0.14	90	0	4
263	5.08	0.20	0.04	1.8	0.00	0.00	0.00	0.00	0.00	0.10	0.08	97	0	4
272	9.25	0.70	0.05	7.0	0.00	0.60	0.40	0.20	0.20	0.20	0.14	84	0	4

HAWAII SITE: HONOKAA

YEAR: 1973

STORM NUMBER	JULIAN DAY	STORM LENGTH (HRS)	RAIN --RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HK)	TIME INTERVAL (MIN) AND INTENSITIES (IN/HK)			CLOUDS NO.	POSITION INDEX	EFFECT CODE
			IN	%			10	15	30			
287	1. 83	0. 40	0. 01	3.	0. 00	1. 20	0. 80	0. 40	0. 20	2. 55	64	4
288	6. 75	0. 40	0. 04	9.	0. 40	0. 00	0. 40	0. 20	0. 10	0. 12	64	4
289	6. 58	0. 20	0. 03	16.	0. 80	0. 00	0. 00	0. 00	0. 10	0. 06	96	4
291	40. 17	4. 20	0. 29	7.	1. 00	1. 20	1. 20	1. 00	0. 90	0. 12	47	33
293	18. 17	0. 30	0. 09	32.	4. 80	0. 00	0. 00	0. 40	0. 20	0. 10	0. 02	7
315	9. 33	2. 10	0. 04	2.	0. 00	2. 40	1. 80	1. 60	1. 40	0. 90	0. 24	56
316	27. 67	10. 30	0. 13	1.	2. 10	3. 60	3. 60	3. 20	1. 40	0. 40	20	108
324	5. 75	0. 90	0. 03	3.	0. 00	0. 00	0. 60	0. 40	0. 20	0. 16	77	1
325	5. 83	0. 60	0. 02	3.	0. 90	0. 00	0. 60	0. 40	0. 20	0. 17	63	1
326	6. 42	0. 20	0. 00	4.	1. 50	0. 00	0. 60	0. 00	0. 00	0. 03	94	4
327	12. 50	1. 50	0. 05	4.	1. 70	1. 20	0. 60	0. 80	0. 40	0. 50	63	4
328	4. 92	0. 40	0. 01	1.	3. 20	0. 00	0. 00	0. 40	0. 20	0. 16	87	4
331	7. 42	1. 00	0. 04	4.	2. 10	1. 20	0. 60	0. 40	0. 40	0. 30	52	4
332	4. 50	0. 40	0. 02	4.	3. 10	0. 00	0. 00	0. 00	0. 20	0. 20	76	4
335	19. 33	1. 00	0. 06	6.	1. 40	1. 20	0. 60	0. 40	0. 20	0. 10	76	4
336	9. 00	0. 30	0. 02	6.	2. 40	0. 00	0. 00	0. 00	0. 00	0. 04	52	4
339	13. 50	0. 90	0. 04	4.	1. 30	1. 20	0. 60	0. 40	0. 40	0. 30	78	2
342	3. 58	3. 00	0. 02	1.	0. 90	4. 80	4. 20	3. 60	3. 00	2. 40	45	4
343	9. 25	0. 30	0. 00	0.	3. 90	0. 00	0. 00	0. 00	0. 00	0. 03	67	4
349	0. 67	0. 30	0. 00	0.	0. 00	0. 00	0. 00	0. 00	0. 00	0. 45	87	4
362	4. 42	0. 70	0. 03	4.	0. 00	1. 20	0. 60	0. 40	0. 30	0. 23	82	4
364	4. 33	0. 30	0. 00	0.	0. 70	0. 00	0. 00	0. 00	0. 00	0. 06	87	4

HAWAII SITE: HONOKAA

YEAR: 1974

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)		CURVE NO.	EROSION (TOP RATE) IN/H		
					5	10	15	30	60	
4	8.25	1.10	0.04	0.00	1.20	0.80	1.00	0.50	0.17	74
18	6.25	1.30	0.04	3.00	1.20	0.60	0.40	0.40	0.21	70
23	15.75	1.50	0.04	2.1.30	2.40	1.20	0.80	0.60	0.09	66
30	9.50	0.60	0.03	4.0.00	1.20	0.60	0.40	0.20	0.07	85
31	3.00	0.30	0.01	4.0.60	0.00	0.60	0.40	0.00	0.10	91
65	10.92	0.70	0.03	4.0.00	1.20	0.60	0.40	0.20	0.09	82
82	10.42	1.10	W	W	0.00	0.60	0.40	0.20	0.11	85
94	3.33	0.90	W	W	1.10	0.00	0.40	0.20	0.22	67
129	12.25	1.30	W	W	0.00	1.20	0.00	0.40	0.20	71
161	15.75	0.30	0.00	Q	0.00	0.00	0.00	0.00	0.02	81
174	25.83	0.30	0.00	Q	0.00	0.00	0.00	0.00	0.01	87
187	15.92	0.60	0.00	Q	0.00	1.20	0.60	0.40	0.39	77
241	6.58	0.80	0.00	Q	0.00	0.60	0.40	0.20	0.12	71
242	26.17	0.50	0.00	Q	0.80	0.00	0.00	0.00	0.02	80
284	1.00	0.20	0.00	Q	0.00	0.00	0.00	0.00	0.01	77
291	0.33	0.20	0.00	Q	0.00	0.00	0.00	0.00	0.01	71
292	0.50	0.80	0.00	Q	0.20	2.40	1.80	1.60	1.20	71
293	0.58	0.40	0.00	Q	1.00	1.20	0.60	0.80	0.40	69
299	15.50	3.40	0.00	Q	0.00	1.20	1.20	1.20	0.70	72
303	1.67	0.40	0.00	Q	3.40	0.00	0.00	0.00	0.10	74
310	0.41	0.03	0.00	Q	0.00	0.00	0.00	0.00	0.07	79
312	3.75	0.08	0.00	Q	0.03	0.24	0.24	0.20	0.00	96
316	2.71	0.37	0.00	Q	0.08	0.96	0.54	0.44	0.26	85
316	4.30	0.90	0.00	Q	0.45	1.08	1.02	0.96	0.62	71
317	1.87	0.04	0.00	Q	1.35	0.17	0.00	0.04	0.00	92
318	0.24	0.12	0.00	Q	1.31	0.60	0.42	0.00	0.00	48
318	0.15	0.03	0.00	Q	1.42	0.00	0.00	0.00	0.17	99
318	3.53	0.17	0.00	Q	1.45	0.12	0.12	0.06	0.04	92
319	5.73	0.16	0.00	Q	1.62	0.36	0.18	0.16	0.06	93
323	2.35	0.15	0.00	Q	0.47	0.12	0.12	0.12	0.09	93
323	2.52	0.07	0.00	Q	0.31	0.06	0.00	0.12	0.05	96
333	5.36	0.23	0.00	Q	0.00	0.24	0.12	0.08	0.12	90
339	0.27	0.02	0.00	Q	0.00	0.00	0.00	0.00	0.03	99
341	1.40	0.12	0.00	Q	0.02	0.24	0.12	0.06	0.08	94
343	3.16	0.17	0.00	Q	0.14	0.72	0.48	0.40	0.12	95
346	5.07	0.18	0.00	Q	0.29	0.36	0.24	0.20	0.06	94
347	1.51	0.13	0.00	Q	0.35	0.24	0.24	0.18	0.04	94
349	8.84	0.55	0.00	Q	0.32	0.60	0.30	0.28	0.15	95

HAWAII SITE: HONOKAA

YEAR: 1974

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- MOISTURE (IN) (%)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			AVG INT	EROSION (IN/HR)
				5	10	15		
354	13.19	4.39	0.07	2	0.55	1.20	1.14	1.08
355	0.37	0.03	0.00	0	4.39	0.00	0.00	0.00
355	13.29	1.58	0.00	0	4.41	0.72	0.72	0.68
356	3.92	0.02	0.00	0	5.99	0.00	0.00	0.00
359	10.96	0.81	0.00	0	6.01	0.36	0.36	0.36
360	1.85	0.23	0.00	0	2.43	0.24	0.24	0.20
360	3.58	0.11	0.00	0	1.06	0.12	0.06	0.07
361	0.68	0.02	0.00	0	1.16	0.00	0.00	0.00

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- MOISTURE (IN) (%)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			AVG INT	EROSION (IN/HR)
				5	10	15		
354	13.19	4.39	0.07	2	0.55	1.20	1.14	1.08
355	0.37	0.03	0.00	0	4.39	0.00	0.00	0.00
355	13.29	1.58	0.00	0	4.41	0.72	0.72	0.68
356	3.92	0.02	0.00	0	5.99	0.00	0.00	0.00
359	10.96	0.81	0.00	0	6.01	0.36	0.36	0.36
360	1.85	0.23	0.00	0	2.43	0.24	0.24	0.20
360	3.58	0.11	0.00	0	1.06	0.12	0.06	0.07
361	0.68	0.02	0.00	0	1.16	0.00	0.00	0.00

HAWAII SITE: HONOKAA

YEAR: 1975

STORM DAY	JULIAN LENGTH (HRS)	RAIN		--RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM TIME INTERVAL (MIN.) AND RAINFALL INTENSITIES (IN./HR.)	TIME INTERVAL (MIN.)	MAXIMUM RAINFALL (IN.)	CLOUD COVER (%)	PRECIP. INTENSITY (IN./HR.)	CLOUD COVER (%)
		IN)	(%)	(IN)	(%)							
2	3.75	0.06	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.01	0.02	0.07
3	1.58	0.22	0.00	0.00	0.06	0.24	0.24	0.24	0.18	0.14	0.14	0.14
3	5.68	0.23	0.00	0.00	0.28	0.48	0.48	0.32	0.20	0.12	0.04	0.04
4	18.26	2.08	0.00	0.00	0.51	1.08	0.72	0.72	0.54	0.45	0.11	4.9
4	19.27	0.96	0.00	0.00	2.59	0.84	0.66	0.56	0.46	0.20	0.05	5.8
6	5.01	0.12	0.00	0.00	3.55	0.12	0.09	0.04	0.05	0.04	0.02	0.94
6	52.11	9.69	0.11	1.1	3.67	1.92	1.80	1.56	1.16	0.97	0.19	7.1
13	4.57	0.21	0.00	0.00	0.00	0.48	0.42	0.32	0.20	0.02	0.04	0.1
13	0.83	0.06	0.00	0.00	0.21	0.12	0.12	0.12	0.06	0.06	0.06	0.0
13	2.38	0.23	0.00	0.00	0.26	0.24	0.18	0.20	0.14	0.12	0.09	0.0
14	4.51	0.61	0.00	0.00	0.50	0.94	0.90	0.76	0.46	0.39	0.14	7.7
16	7.60	0.08	0.00	0.00	1.11	0.00	0.06	0.04	0.04	0.02	0.01	0.6
20	1.10	0.18	0.00	0.00	0.08	0.36	0.30	0.20	0.12	0.11	0.17	0.2
24	1.27	0.05	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.04	0.0
25	2.17	0.05	0.00	0.00	0.24	0.12	0.06	0.04	0.04	0.02	0.02	0.05
26	4.34	0.33	0.00	0.00	0.10	1.08	0.84	0.72	0.44	0.28	0.07	2.6
27	12.23	2.48	0.00	0.00	0.43	0.72	0.66	0.68	0.48	0.37	0.20	4.6
30	8.18	0.25	0.00	0.00	2.36	0.12	0.06	0.08	0.06	0.04	0.03	3.9
31	14.80	0.13	0.00	0.00	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.04
32	6.40	0.37	0.00	0.00	2.36	0.35	0.24	0.20	0.18	0.13	0.06	3.5
34	3.70	0.68	0.00	0.00	0.74	0.72	0.66	0.64	0.48	0.40	0.18	3.5
35	1.42	0.04	0.00	0.00	1.43	0.00	0.00	0.00	0.02	0.02	0.03	0.03
35	1.52	0.16	0.00	0.00	1.22	0.24	0.18	0.16	0.16	0.12	0.10	0.13
41	3.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.05
41	0.38	0.04	0.00	0.00	0.09	0.00	0.00	0.11	0.07	0.00	0.12	0.08
42	22.02	1.89	0.00	0.00	0.14	0.60	0.60	0.60	0.48	0.40	0.08	5.1
43	4.14	0.04	0.00	0.00	2.04	0.00	0.00	0.00	0.00	0.02	0.01	0.03
48	1.19	0.08	0.00	0.00	0.04	0.12	0.12	0.12	0.10	0.07	0.07	0.07
48	11.64	0.63	0.00	0.00	0.08	0.12	0.12	0.12	0.12	0.12	0.05	0.0
54	1.44	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03
56	1.78	0.05	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.02	0.01	0.03
57	1.04	0.05	0.00	0.00	0.07	0.07	0.00	0.00	0.00	0.01	0.04	0.08
57	20.04	0.97	0.00	0.00	0.12	0.60	0.48	0.36	0.32	0.24	0.05	4.7
58	19.13	1.98	0.03	2.03	1.09	2.88	2.34	1.84	1.56	0.50	0.10	0.17
59	2.90	0.15	0.00	0.00	3.07	0.36	0.18	0.16	0.10	0.06	0.05	0.5
62	5.12	0.21	0.00	0.00	3.14	0.24	0.18	0.16	0.12	0.08	0.04	0.1
63	2.28	0.07	0.00	0.00	2.34	0.98	0.98	0.98	0.98	0.98	0.03	2.8
64	14.14	0.37	0.00	0.00	4.44	0.36	0.30	0.30	0.12	0.08	0.03	0.4

HAWAII SITE: HONOKAA

YEAR: 1975

STORM DAY	JULIAN LENGTH	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (Z)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			CURVE NO	AVG INT	INT NO	CURVE INDEX	EROSION DROP CODE
					5	10	15					
65	1.25	0.03	0.00	0.66	0.00	0.00	0.00	99	0.02	99	0	3
69	1.60	0.07	0.00	0.40	0.00	0.00	0.01	97	0.04	97	0	3
70	0.67	0.03	0.00	0.10	0.00	0.00	0.00	98	0.05	98	0	3
71	2.71	0.11	0.00	0.10	0.12	0.06	0.08	95	0.04	95	0	3
71	4.90	0.20	0.00	0.21	0.00	0.00	0.12	91	0.04	91	0	3
72	11.47	1.70	0.00	0.41	0.60	0.60	0.48	54	0.15	54	5	0
73	5.89	0.34	0.00	0.21	0.36	0.30	0.28	86	0.06	86	0	0
77	0.75	0.03	0.00	0.2	0.03	0.00	0.00	99	0.03	99	0	0
77	13.30	0.35	0.00	0.36	0.24	0.24	0.20	85	0.03	85	0	4
87	17.29	1.35	0.00	0.60	0.54	0.56	0.50	60	0.07	60	4	0
92	0.98	0.05	0.00	0.35	0.00	0.00	0.02	98	0.05	98	0	0
95	0.74	0.06	0.00	0.05	0.17	0.06	0.04	97	0.08	97	0	0
104	2.79	0.30	0.00	0.00	0.84	0.60	0.52	87	0.11	87	0	0
106	3.26	0.03	0.00	0.00	0.30	0.00	0.00	99	0.00	99	0	0
107	2.19	0.12	0.00	0.00	0.33	0.24	0.18	94	0.06	94	0	0
109	1.77	0.05	0.00	0.00	0.45	0.24	0.12	93	0.03	93	0	0
109	2.89	0.04	0.00	0.00	0.20	0.00	0.00	98	0.01	98	0	0
109	30.38	1.52	0.00	0.00	0.23	0.36	0.30	57	0.05	57	2	0
111	5.01	0.19	0.00	0.00	1.75	0.24	0.12	90	0.04	91	0	0
112	3.68	0.06	0.00	0.00	1.91	0.00	0.00	91	0.02	97	0	0
113	1.41	0.04	0.00	0.00	1.85	0.00	0.00	98	0.02	98	0	0
119	11.94	0.37	0.00	0.00	0.00	0.24	0.18	97	0.03	84	0	0
121	0.15	0.04	0.00	0.00	0.37	0.25	0.00	99	0.27	98	0	0
128	0.27	0.03	0.00	0.00	0.05	0.00	0.00	99	0.09	99	0	0
132	0.14	0.04	0.00	0.00	0.03	0.09	0.00	97	0.03	97	0	0
137	0.83	0.05	0.00	0.00	0.04	0.12	0.12	97	0.06	97	0	0
138	1.06	0.03	0.00	0.00	0.05	0.00	0.00	99	0.03	99	0	0
140	2.14	0.06	0.00	0.00	0.08	0.00	0.00	97	0.03	97	0	0
148	0.70	0.09	0.00	0.00	0.00	0.36	0.24	96	0.08	96	15	0
151	2.21	0.19	0.00	0.00	0.09	0.36	0.24	97	0.03	97	0	0
155	0.42	0.05	0.00	0.00	0.19	0.07	0.00	97	0.01	97	0	0
162	0.63	0.09	0.00	0.00	0.00	0.24	0.12	96	0.08	96	0	0
163	1.26	0.05	0.00	0.00	0.09	0.05	0.00	97	0.04	97	0	0
166	4.66	0.02	0.00	0.00	0.15	0.00	0.00	97	0.00	97	0	0
169	4.68	0.06	0.00	0.00	0.02	0.24	0.12	97	0.05	97	0	0
176	5.36	0.04	0.00	0.00	0.00	0.00	0.00	98	0.00	98	0	0
177	0.11	0.06	0.00	0.00	0.04	0.48	0.00	97	0.00	97	63	0
179	0.46	0.02	0.00	0.00	0.10	0.00	0.00	97	0.05	97	0	0

HAWAII SITE: HONOKAA

YEAR: 1975

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES	AVG INT.	CURVE NO.	EROSION INDEX	CROP CODE
184	0.14	0.06	0.00	0.02	0.00	0.00 0.00 0.00 0.00 0.00	0.40	97	0	
184	12.65	0.18	0.00	0.06	0.00	0.12 0.08 0.04 0.03 0.03	0.04	92	0	
188	7.56	0.12	0.00	0.23	0.48	0.36 0.28 0.14 0.07 0.02	0.02	94	0	
189	0.51	0.04	0.00	0.36	0.12	0.06 0.04 0.05 0.00 0.06	0.08	90	0	
189	1.94	0.02	0.00	0.16	0.00	0.00 0.00 0.00 0.00 0.01	0.01	99	0	
192	8.74	0.39	0.00	0.18	0.36	0.24 0.24 0.18 0.14 0.04	0.04	94	0	
194	14.13	1.07	0.00	0.45	0.84	0.66 0.56 0.40 0.40 0.07	0.07	65	0	
196	11.75	0.19	0.00	1.07	0.48	0.48 0.36 0.18 0.10 0.02	0.02	91	0	
203	0.08	0.06	0.00	0.19	0.34	0.00 0.00 0.00 0.00 0.00	0.00	97	0	
205	0.66	0.05	0.00	0.06	0.30	0.06 0.04 0.02 0.00 0.08	0.08	97	0	
207	1.61	0.02	0.00	0.12	0.00	0.00 0.00 0.00 0.00 0.00	0.01	99	0	
208	2.85	0.16	0.00	0.14	0.96	0.48 0.36 0.20 0.11 0.02	0.02	92	0	
211	0.33	0.02	0.00	0.19	0.00	0.00 0.00 0.00 0.00 0.00	0.00	99	0	
211	0.67	0.05	0.00	0.21	0.02	0.00 0.04 0.02 0.00 0.07	0.07	97	0	
212	2.15	0.11	0.00	0.24	0.12	0.12 0.08 0.08 0.07 0.05	0.05	95	0	
212	3.91	0.04	0.00	0.35	0.00	0.00 0.00 0.00 0.00 0.01	0.01	98	0	
212	2.11	0.04	0.00	0.39	0.00	0.00 0.00 0.00 0.00 0.02	0.02	99	0	
213	2.46	0.28	0.00	0.43	0.36	0.36 0.32 0.22 0.19 0.11	0.11	89	0	
213	4.56	0.37	0.00	0.54	0.60	0.42 0.44 0.32 0.21 0.08	0.08	84	0	
216	6.46	0.17	0.00	0.91	0.24	0.12 0.16 0.10 0.07 0.03	0.03	92	0	
221	1.63	0.15	0.00	0.17	0.24	0.18 0.16 0.14 0.07 0.09	0.09	93	0	
222	0.88	0.06	0.00	0.15	0.12	0.06 0.08 0.08 0.00 0.07	0.07	97	0	
222	5.15	0.18	0.00	0.22	0.24	0.24 0.20 0.14 0.08 0.04	0.04	92	0	
223	3.18	0.05	0.00	0.40	0.00	0.00 0.00 0.00 0.02 0.01	0.01	98	0	
226	4.73	0.12	0.00	0.44	0.29	0.12 0.08 0.05 0.05 0.03	0.03	97	0	
226	0.35	0.02	0.00	0.42	0.00	0.00 0.00 0.00 0.00 0.00	0.00	99	0	
227	1.18	0.07	0.00	0.44	0.24	0.12 0.08 0.06 0.05 0.05	0.05	97	0	
227	1.29	0.06	0.00	0.26	0.12	0.06 0.08 0.06 0.03 0.04	0.04	97	0	
229	9.14	0.36	0.00	0.27	0.24	0.12 0.16 0.10 0.08 0.04	0.04	85	0	
230	17.16	0.78	0.00	0.63	0.48	0.42 0.36 0.24 0.14 0.05	0.05	72	0	
231	4.09	0.10	0.00	1.41	0.00	0.12 0.08 0.04 0.05 0.02	0.02	95	0	
232	0.17	0.02	0.00	1.37	0.00	0.07 0.00 0.00 0.00 0.04	0.04	99	0	
235	0.66	0.03	0.00	0.91	0.00	0.00 0.00 0.00 0.00 0.04	0.04	99	0	
240	1.60	0.08	0.00	0.03	0.36	0.24 0.16 0.08 0.04 0.05	0.05	96	0	
241	7.39	0.13	0.00	0.08	0.00	0.12 0.08 0.06 0.03 0.02	0.02	94	0	
242	13.56	1.14	0.07	2.22	0.84	0.78 0.64 0.44 0.29 0.09	0.09	78	0	
250	3.04	0.11	0.00	0.00	0.24	0.18 0.12 0.06 0.03 0.03	0.03	95	0	
254	1.05	0.09	0.00	0.11	0.24	0.18 0.12 0.10 0.06 0.09	0.09	95	0	

HAWAII SITE: HONOKAA

YEAR: 1975

JULIAN DAY	STORM LENGTH (HRS)	RAIN		--RUNOFF--		ANT. MOISTURE (%)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES (IN/HR)			CURVE NO	EROSION INDEX	CROP CODE
		(IN)	(IN)	5	10			15	30	60			
259	2.61	0.02	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	99	0	4
259	4.25	0.17	0.00	0.02	0.24	0.12	0.12	0.08	0.09	0.04	92	0	4
263	2.56	0.07	0.00	0.19	0.36	0.24	0.16	0.08	0.04	0.03	96	0	4
268	6.99	0.03	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	99	0	4
270	0.13	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.22	99	0	4
274	0.03	0.02	0.00	0.06	0.13	0.00	0.00	0.00	0.00	0.70	99	0	4
274	27.57	0.29	0.00	0.05	0.36	0.24	0.20	0.16	0.10	0.01	87	0	4
277	1.89	0.08	0.00	0.31	0.12	0.06	0.08	0.06	0.05	0.05	96	0	4
281	14.21	0.34	0.00	0.08	0.24	0.12	0.08	0.08	0.08	0.02	86	0	4
283	1.24	0.02	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.02	99	0	4
288	1.35	0.09	0.00	0.02	0.24	0.12	0.08	0.04	0.04	0.06	96	0	4
289	5.22	0.18	0.00	0.09	0.36	0.30	0.28	0.08	0.11	0.03	92	0	4
289	2.01	0.09	0.00	0.27	0.36	0.24	0.24	0.02	0.02	0.01	96	0	4
290	1.08	0.10	0.00	0.36	0.00	0.06	0.04	0.04	0.02	0.01	95	0	4
291	7.68	0.69	0.04	6.46	2.76	2.52	1.69	1.00	0.52	0.10	96	0	4
299	2.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99	0	4
300	6.00	0.11	0.00	0.02	0.24	0.18	0.20	0.14	0.09	0.05	95	0	4
307	9.47	0.04	0.00	0.00	0.12	0.06	0.04	0.02	0.02	0.01	95	0	4
313	19.24	0.26	0.06	25.00	0.00	0.36	0.36	0.32	0.24	0.13	94	6	4
315	7.54	0.39	0.03	9.00	0.26	0.48	0.42	0.40	0.30	0.24	91	0	4
319	20.27	0.37	0.00	0.00	0.38	0.12	0.12	0.06	0.07	0.02	84	0	4
325	3.81	0.09	0.00	0.00	0.00	0.12	0.12	0.08	0.05	0.02	95	0	4
328	13.58	0.32	0.02	4.00	0.09	0.72	0.72	0.64	0.38	0.22	92	0	4
333	15.91	0.69	0.08	1.20	0.32	0.60	0.30	0.24	0.16	0.14	94	0	4
334	11.80	0.06	0.00	0.69	0.00	0.00	0.04	0.02	0.01	0.00	97	0	4
335	0.77	0.06	0.00	0.75	0.12	0.12	0.06	0.09	0.07	0.07	97	0	4
337	7.40	0.09	0.00	0.80	0.12	0.06	0.08	0.04	0.04	0.01	95	0	4
338	14.33	0.23	0.00	0.90	0.60	0.48	0.32	0.26	0.14	0.02	90	0	4
351	3.35	0.09	0.00	0.00	0.12	0.06	0.08	0.04	0.03	0.03	96	0	4
362	0.43	0.04	0.00	0.00	0.00	0.06	0.06	0.00	0.08	0.08	98	0	4
365	0.59	0.03	0.00	0.04	0.12	0.06	0.08	0.04	0.00	0.06	98	0	4

HAWAII SITE: HONDEKA

YEAR: 1976

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)		AUG NO.	INT INDEX	CODE	
					5	10	15	30	60	
3	6.33	0.06	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0 4
4	8.29	0.79	0.06	7.0	0.06	0.36	0.24	0.20	0.19	0 4
5	0.14	0.03	0.00	0.00	0.84	0.12	0.00	0.00	0.21	0 4
6	10.64	0.21	0.06	33.0	0.87	0.24	0.18	0.12	0.10	0 4
8	2.24	0.39	0.00	1.0	1.08	0.84	0.84	0.74	0.37	2 4
12	2.56	0.06	0.00	0.0	0.39	0.12	0.00	0.02	0.02	0 4
17	4.01	0.18	0.00	0.0	0.06	0.36	0.18	0.12	0.12	0 4
20	1.15	0.06	0.00	0.0	0.18	0.12	0.06	0.08	0.04	0 4
31	13.45	0.38	0.05	13.0	0.00	0.36	0.30	0.24	0.13	0 4
37	7.92	0.34	0.02	6.0	0.00	0.72	0.60	0.48	0.36	0 4
39	0.14	0.04	0.00	0.0	0.34	0.00	0.00	0.00	0.00	0 4
39	0.02	0.04	0.00	0.0	0.38	0.09	0.00	0.00	0.00	0 4
44	31.13	0.87	0.02	3.0	0.04	0.72	0.36	0.28	0.24	0 4
46	18.00	0.16	0.00	2.0	0.87	0.24	0.24	0.24	0.16	0 4
48	4.92	0.07	0.00	1.0	1.03	0.24	0.12	0.08	0.06	0 4
51	12.43	0.24	0.01	2.0	0.23	0.72	0.66	0.48	0.28	0 4
52	7.26	0.24	0.00	1.0	0.31	0.48	0.36	0.24	0.12	0 4
53	20.66	1.99	0.04	2.0	0.55	1.08	1.02	1.00	0.84	0 4
54	0.43	0.06	0.00	0.0	2.47	0.24	0.18	0.12	0.00	0 4
57	1.77	0.07	0.00	4.0	2.29	0.24	0.18	0.16	0.10	0 4
62	13.39	2.74	0.09	4.0	0.07	1.56	1.32	1.24	1.12	0 4
53	9.62	1.55	0.06	4.0	2.74	0.96	0.90	0.76	0.56	0 4
64	5.92	1.49	0.00	0.0	4.29	2.28	1.56	1.16	0.84	0 4
66	27.55	0.68	0.01	1.0	5.78	0.36	0.30	0.28	0.18	0 4
68	1.80	0.04	0.00	0.0	3.72	0.00	0.00	0.00	0.00	0 4
69	5.71	0.08	0.00	0.0	2.21	0.12	0.06	0.04	0.02	0 4
70	13.00	1.84	0.09	5.0	0.81	0.48	0.42	0.40	0.36	0 4
71	7.69	0.53	0.00	0.0	2.65	0.48	0.30	0.24	0.16	0 4
76	7.35	1.46	0.02	1.0	0.53	2.40	1.68	1.24	0.84	0 4
83	1.27	0.05	0.00	0.0	0.00	0.12	0.06	0.04	0.02	0 4
84	17.39	0.11	0.00	0.0	0.05	0.24	0.18	0.12	0.06	0 4
85	4.47	0.15	0.00	0.0	0.17	0.24	0.12	0.12	0.10	0 4
87	4.30	0.22	0.02	1.0	0.32	0.36	0.30	0.28	0.18	0 4
89	25.14	0.49	0.00	0.0	0.48	0.38	0.30	0.20	0.10	0 4
91	22.77	1.78	0.02	1.0	0.86	1.20	1.14	1.04	0.70	0 4
92	1.81	0.07	0.00	0.0	2.48	0.36	0.18	0.00	0.00	0 4
94	6.25	0.72	0.00	0.0	2.34	1.20	0.96	0.88	0.52	0 4
96	18.79	0.16	0.00	0.0	2.57	0.24	0.12	0.16	0.08	0 4

HAWAII SITE: HONOKAA

YEAR: 1976

TIME INTERVAL (MIN) AND

MAXIMUM RAINFALL INTENSITIES

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME (MIN)	INTERVAL (MIN)	Rainfall Intensity (IN/HR)	AVG. CURE FUSION (%)	NO. INDEX	INDEX	TIME (HR)
100 15.99	0.31	0.00	0.16	0.48	0.42	0.28	0.14	0.10	0.02	0.4	87
108 1.67	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.4	98
110 0.00	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.02	0.4	99
111 18.21	0.33	0.00	0.07	0.36	0.24	0.16	0.12	0.06	0.02	0.4	86
113 8.42	0.27	0.00	0.40	0.36	0.48	0.44	0.06	0.09	0.03	0.4	83
113 9.91	0.25	0.00	0.63	0.36	0.39	0.20	0.10	0.08	0.02	0.4	89
114 1.12	0.16	0.00	0.88	0.24	0.24	0.16	0.12	0.15	0.15	0.4	92
119 9.89	0.07	0.00	0.16	0.12	0.04	0.12	0.08	0.06	0.00	0.4	96
120 7.68	0.78	0.00	0.07	0.96	0.66	0.44	0.40	0.20	0.10	0.4	75
129 13.18	0.08	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.4	96
131 1.42	0.06	0.00	0.08	0.12	0.06	0.04	0.06	0.04	0.04	0.4	97
132 13.51	0.24	0.00	0.15	0.48	0.36	0.32	0.16	0.09	0.02	0.4	89
133 4.65	0.05	0.00	0.39	0.20	0.00	0.00	0.00	0.01	0.01	0.4	93
134 1.28	0.12	0.00	0.44	0.48	0.24	0.20	0.12	0.10	0.09	0.4	94
141 5.95	0.06	0.00	0.00	0.12	0.06	0.04	0.02	0.01	0.01	0.4	97
142 5.62	0.15	0.00	1.0	0.06	0.48	0.30	0.36	0.20	0.01	0.4	95
159 16.86	0.06	0.00	0.00	0.00	0.06	0.04	0.02	0.01	0.00	0.4	97
165 0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	99
169 6.06	0.11	0.00	0.02	0.24	0.18	0.16	0.08	0.04	0.02	0.4	95
169 13.99	0.10	0.00	0.12	0.12	0.08	0.06	0.03	0.00	0.00	0.4	95
171 0.30	0.09	0.00	0.21	0.36	0.24	0.20	0.00	0.00	0.31	0.4	96
177 8.50	0.14	0.00	0.00	0.24	0.18	0.12	0.06	0.06	0.02	0.4	94
178 18.06	0.21	0.00	0.14	0.24	0.18	0.12	0.08	0.05	0.01	0.4	91
180 20.78	0.06	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.4	97
182 7.06	0.05	0.00	0.40	0.00	0.06	0.04	0.02	0.02	0.00	0.4	98
190 14.40	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.4	96
194 27.07	0.06	0.00	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.4	97
197 0.73	0.08	0.00	0.06	0.12	0.12	0.10	0.00	0.00	0.11	0.4	96
202 17.49	0.21	0.00	0.03	0.48	0.48	0.32	0.16	0.09	0.01	0.4	90
205 17.36	0.19	0.00	0.00	0.24	0.18	0.12	0.08	0.04	0.01	0.4	91
217 5.81	0.19	0.00	0.00	0.12	0.18	0.16	0.12	0.08	0.03	0.4	91
220 1.92	0.05	0.00	0.19	0.14	0.06	0.03	0.02	0.01	0.03	0.4	97
225 2.96	0.06	0.00	0.05	0.00	0.00	0.00	0.04	0.02	0.02	0.4	97
226 0.19	0.07	0.00	0.06	0.24	0.18	0.00	0.00	0.00	0.00	0.4	97
232 10.98	0.54	0.00	0.00	0.48	0.42	0.40	0.30	0.23	0.05	0.4	79
234 0.05	0.03	0.00	0.54	0.16	0.00	0.00	0.00	0.00	0.66	0.4	98
241 7.88	2.79	0.00	0.00	1.68	1.44	1.24	1.02	0.74	0.36	0.4	44
243 15.40	0.12	0.00	2.79	0.16	0.06	0.04	0.02	0.03	0.00	0.4	23

HAWAII SITE: HONOKAA

YEAR: 1976

STORM JULIAN DAY	STORM LENGTH (HRS)	RAIN		--RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES	CURVE NO.	EROSION INDEX CODE
		RAIN (IN)	(IN)	--RUNOFF-- (IN)	(IN)					
246	8.36	0.05	0.00	0.0	2.91	0.00	0.04	0.02	0.01	0.01
247	0.42	0.05	0.00	0.0	0.17	0.06	0.00	0.00	0.11	0.4
248	1.13	0.05	0.00	0.0	0.21	0.24	0.12	0.03	0.04	0.4
252	10.73	0.12	0.00	0.0	0.09	0.24	0.24	0.20	0.12	0.06
261	0.48	0.03	0.00	0.0	0.00	0.00	0.00	0.00	0.06	0.4
267	1.57	0.15	0.00	0.0	0.00	0.15	0.24	0.18	0.16	0.09
270	2.88	0.10	0.00	0.0	0.15	0.24	0.12	0.06	0.03	0.4
273	1.15	0.11	0.00	0.0	0.10	0.24	0.12	0.12	0.06	0.07
276	0.75	0.20	0.00	0.0	0.11	0.60	0.42	0.36	0.18	0.00
279	1.03	0.17	0.00	0.0	0.20	0.36	0.36	0.16	0.14	0.16
281	0.47	0.06	0.00	0.0	0.37	0.12	0.06	0.04	0.00	0.00
281	1.58	0.17	0.00	0.0	0.23	0.48	0.36	0.32	0.22	0.11
283	8.60	0.09	0.00	0.0	0.40	0.00	0.06	0.04	0.02	0.02
285	16.50	0.07	0.00	0.0	0.33	0.00	0.06	0.04	0.02	0.01
289	19.60	0.84	0.03	0.0	0.07	0.72	0.72	0.72	0.58	0.36
293	15.22	0.09	0.00	0.0	0.84	0.12	0.12	0.08	0.06	0.04
295	7.26	0.06	0.00	0.0	0.09	0.00	0.00	0.00	0.00	0.00
307	31.35	1.58	0.13	0.0	0.00	0.72	0.66	0.66	0.58	0.51
309	15.99	0.11	0.00	0.0	1.58	0.24	0.12	0.03	0.06	0.04
310	18.00	0.30	0.00	0.0	1.68	0.84	0.42	0.28	0.14	0.07
311	16.56	0.52	0.01	0.2	1.98	0.96	0.84	0.56	0.30	0.20
313	16.71	3.12	0.14	4.0	0.93	0.96	0.90	0.84	0.66	0.50
314	16.22	0.28	0.00	0.0	4.05	0.36	0.18	0.20	0.16	0.13
320	15.91	2.15	0.28	1.3	0.28	1.20	1.14	1.04	0.72	0.52
323	15.08	0.07	0.00	0.0	2.15	0.11	0.12	0.12	0.02	0.00
324	26.02	0.16	0.00	0.0	2.23	0.12	0.12	0.08	0.08	0.04
325	14.34	0.19	0.00	0.0	2.39	0.24	0.18	0.16	0.12	0.08
327	14.77	0.17	0.00	0.0	0.43	0.12	0.12	0.08	0.06	0.03
331	1.58	0.13	0.00	0.0	0.17	0.24	0.24	0.16	0.12	0.08
332	14.90	0.31	0.00	0.0	0.30	0.36	0.18	0.16	0.12	0.08
335	1.03	0.09	0.00	0.0	0.44	0.60	0.00	0.00	0.06	0.09
345	22.01	0.25	0.00	0.4	0.00	0.24	0.18	0.16	0.14	0.10
350	16.54	2.73	0.40	15.0	0.25	1.20	1.14	1.12	1.08	0.92
359	14.64	0.09	0.00	0.0	0.00	0.00	0.06	0.04	0.02	0.01
361	13.29	1.73	0.08	5.5	0.09	0.95	0.90	0.80	0.76	0.66

HAWAII SITE: HONOKAA

YEAR: 1977

STORM DAY	JULIAN DAY	STORM LENGTH (HRS)	RAIN --RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES			AUG NO.	CURVE NO.	EFFECTIVE RIDGE / CREEK
			IN	%			5	10	15			
18	5.93	0.14	0.00	0	0.00	0.24	0.18	0.16	0.11	0.10	0.02	93
21	3.51	0.58	0.00	0	0.14	0.60	0.60	0.56	0.44	0.29	0.16	78
28	19.13	2.22	0.00	0	0.00	0.60	0.60	0.60	0.52	0.42	0.12	47
29	4.95	0.14	0.00	0	2.22	0.36	0.24	0.16	0.08	0.04	0.03	94
33	11.24	1.22	0.00	0	2.36	0.96	0.72	0.64	0.40	0.37	0.11	62
37	3.62	0.11	0.00	0	1.22	0.12	0.06	0.04	0.04	0.03	0.03	95
53	0.12	0.04	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.37	98
54	4.47	0.20	0.00	0	0.04	0.48	0.36	0.28	0.14	0.07	0.05	91
57	20.36	2.22	0.11	5	0.25	1.08	0.90	0.92	0.74	0.54	0.17	61
59	0.12	0.04	0.00	0	2.42	0.00	0.00	0.00	0.00	0.00	0.34	98
60	18.61	0.09	0.00	0	2.26	0.12	0.06	0.04	0.02	0.02	0.00	96
61	22.49	0.15	0.00	0	2.35	0.12	0.06	0.16	0.12	0.07	0.00	93
62	23.33	0.57	0.00	0	2.50	0.48	0.36	0.24	0.14	0.11	0.02	78
63	22.52	0.38	0.00	0	0.85	0.36	0.39	0.24	0.16	0.09	0.02	84
64	20.63	0.43	0.00	0	1.23	0.36	0.36	0.32	0.16	0.08	0.02	82
65	20.91	0.43	0.00	0	1.62	0.48	0.42	0.40	0.24	0.16	0.02	82
66	23.55	0.50	0.00	0	1.96	0.24	0.18	0.20	0.14	0.10	0.02	80
70	20.14	0.16	0.00	0	0.93	0.36	0.30	0.32	0.22	0.11	0.00	93
72	14.50	0.68	0.00	0	0.16	0.36	0.36	0.30	0.28	0.22	0.19	75
73	18.26	0.04	0.00	0	0.84	0.00	0.00	0.00	0.00	0.00	0.00	93
74	5.24	0.31	0.00	0	0.88	0.36	0.36	0.32	0.16	0.11	0.06	87
76	22.58	0.98	0.03	3	1.03	0.96	0.72	0.48	0.28	0.21	0.04	75
78	8.67	0.16	0.00	0	1.34	0.36	0.24	0.12	0.06	0.04	0.02	93
79	13.68	1.71	W	W	1.45	1.44	1.38	1.36	0.96	0.30	0.13	54
80	6.56	0.42	0.00	0	2.86	0.72	0.54	0.52	0.50	0.33	0.06	83
80	9.46	0.89	0.00	0	3.27	0.84	0.66	0.48	0.32	0.19	0.09	69
81	28.83	0.75	0.00	0	4.16	0.36	0.36	0.32	0.26	0.19	0.03	73
82	13.13	1.23	0.00	0	3.93	0.84	0.78	0.60	0.42	0.30	0.09	62
87	5.26	0.15	0.00	0	1.23	0.12	0.18	0.12	0.14	0.07	0.03	93
88	2.23	0.11	0.00	0	0.15	0.36	0.18	0.12	0.06	0.03	0.05	95
92	3.10	0.33	0.00	0	0.26	0.24	0.24	0.22	0.19	0.11	0.00	86
93	4.31	0.07	0.00	0	0.43	0.12	0.06	0.04	0.04	0.02	0.02	97
94	9.07	1.62	0.15	?	0.40	0.84	0.84	0.76	0.60	0.55	0.19	72
95	21.00	3.49	W	W	2.02	0.72	0.66	0.64	0.56	0.47	0.17	46
96	5.47	1.00	W	W	5.51	0.48	0.48	0.48	0.40	0.37	0.18	67
96	39.67	6.91	W	W	6.51	1.08	1.08	0.88	0.72	0.58	0.17	22
98	25.44	0.33	0.00	0	13.09	0.12	0.12	0.08	0.08	0.05	0.01	86
101	0.03	0.02	0.00	0	8.24	0.16	0.00	0.00	0.00	0.00	0.00	99

HAWAII SITE: HONOKAA

YEAR: 1977

JULIAN DAY	STORM LENGTH (HRS)	RAIN		ANT. MOISTURE		TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)		AVG INT		CURVE NO. INDEX		CHRP CODE		
		(IN)	(IN)	(IN)	(IN)	5	10	15	30	60	0.03	94	0	2
105	4.06	0.12	0.00	0.02	0.02	0.24	0.18	0.12	0.08	0.06	0.03	94	0	2
110	16.46	1.17	0.06	5.0	0.12	0.84	0.78	0.72	0.56	0.37	0.07	75	4	2
111	8.37	0.15	0.00	0.0	0.17	0.12	0.18	0.12	0.10	0.05	0.02	23	0	2
116	2.08	0.12	0.00	0.0	0.15	0.24	0.12	0.12	0.08	0.05	0.06	94	0	2
119	28.21	2.06	0.18	9.0	0.12	1.08	0.84	0.80	0.62	0.35	0.07	66	8	2
123	0.67	0.07	0.00	0.0	0.02	0.00	0.00	0.00	0.00	0.00	0.11	97	0	2
131	0.18	0.04	0.00	0.0	0.00	0.00	0.00	0.13	0.00	0.00	0.23	98	0	2
142	4.29	0.18	0.00	0.0	0.00	0.12	0.12	0.12	0.12	0.11	0.04	92	0	2
143	6.15	0.15	0.00	0.0	0.18	0.24	0.18	0.16	0.14	0.04	0.02	93	0	2
145	3.10	0.09	0.00	0.0	0.34	0.00	0.06	0.04	0.04	0.04	0.03	96	0	2
148	11.97	0.12	0.00	0.0	0.24	0.24	0.24	0.16	0.10	0.06	0.01	94	0	2
150	6.55	0.07	0.00	0.0	0.22	0.00	0.00	0.00	0.00	0.02	0.01	96	0	2
151	1.57	0.05	0.00	0.0	0.29	0.00	0.04	0.04	0.02	0.02	0.03	78	4	2
155	6.79	0.11	0.00	0.0	0.12	0.24	0.12	0.08	0.10	0.05	0.02	95	0	2
156	4.33	0.57	0.00	1.0	0.16	0.96	0.90	0.84	0.44	0.23	0.13	81	1	2
173	7.24	0.33	0.00	0.0	0.00	0.24	0.24	0.24	0.14	0.08	0.04	86	0	2
174	6.39	0.04	0.00	0.0	0.33	0.00	0.00	0.00	0.00	0.00	0.01	98	0	2
175	20.86	0.09	0.00	0.0	0.36	0.24	0.12	0.08	0.04	0.03	0.00	95	0	2
179	8.14	0.06	0.00	0.0	0.13	0.00	0.06	0.04	0.04	0.00	0.00	97	0	2
180	8.21	0.05	0.00	0.0	0.17	0.00	0.06	0.04	0.02	0.01	0.01	98	0	2
181	4.72	0.30	0.00	0.0	0.12	0.48	0.48	0.40	0.28	0.18	0.06	87	0	2
185	8.53	0.06	0.00	0.0	0.35	0.00	0.06	0.04	0.02	0.01	0.00	97	0	2
186	8.87	0.64	0.00	0.0	0.37	0.96	0.60	0.48	0.30	0.19	0.07	76	1	0
188	3.60	0.14	0.00	0.0	0.71	0.24	0.18	0.12	0.08	0.07	0.04	93	0	2
189	16.61	0.23	0.00	0.0	0.35	0.36	0.24	0.16	0.14	0.13	0.05	81	0	2
190	2.53	0.20	0.00	0.0	1.54	0.36	0.24	0.20	0.12	0.09	0.08	91	0	2
192	1.29	0.06	0.00	0.0	1.03	0.00	0.00	0.04	0.02	0.02	0.04	97	0	2
193	20.31	0.31	0.00	0.0	1.09	0.24	0.12	0.12	0.08	0.07	0.02	87	0	2
194	11.97	0.34	0.00	0.0	0.80	0.24	0.24	0.20	0.14	0.10	0.03	86	0	2
195	7.00	0.33	0.00	0.0	0.91	0.36	0.30	0.28	0.14	0.10	0.05	86	0	2
198	8.42	0.59	0.03	5.0	0.98	0.48	0.42	0.36	0.20	0.21	0.10	85	0	2
198	5.07	0.07	0.00	0.0	1.09	0.24	0.12	0.06	0.04	0.02	0.01	96	0	2
199	5.57	0.09	0.00	0.0	1.34	0.12	0.06	0.08	0.04	0.02	0.02	95	0	2
200	1.24	0.08	0.00	0.0	1.09	0.25	0.06	0.04	0.06	0.03	0.06	96	0	2
201	11.41	0.07	0.00	0.0	0.84	0.36	0.18	0.12	0.06	0.03	0.00	97	0	2
202	12.63	0.27	0.00	0.0	0.91	0.12	0.12	0.08	0.08	0.06	0.02	88	0	2
205	2.77	0.06	0.00	0.0	0.42	0.12	0.06	0.04	0.02	0.02	0.02	97	0	2

HAWAII SITE: HONOKAA

YEAR: 1977

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)	-RUNOFF-- (IN)	ANT. MOISTURE (%)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)				CURVE NO.	EROSION INDEX	CROP CODE
					5	10	15	30			
206	10.95	0.08	0.00	0	0.41	0.00	0.04	0.04	96	0	3
208	5.77	0.32	0.00	1	0.16	0.60	0.30	0.32	97	0	3
209	4.45	0.06	0.00	0	0.48	0.00	0.04	0.02	97	0	3
212	12.10	0.30	0.00	0	0.38	0.48	0.24	0.20	97	0	3
213	20.10	0.29	0.00	0	0.68	0.24	0.18	0.20	97	0	3
214	8.11	0.69	0.05	7	0.65	0.48	0.48	0.36	97	0	3
216	5.93	0.72	0.03	4	1.28	0.84	0.72	0.68	97	0	3
217	6.93	0.09	0.00	0	2.00	0.60	0.36	0.24	97	0	3
218	14.83	1.68	0.04	3	1.79	1.08	1.02	0.80	97	0	3
223	12.20	2.95	W	W	1.63	0.84	0.78	0.72	97	0	3
225	2.66	0.02	0.00	0	2.95	0.00	0.00	0.00	97	0	3
225	3.96	0.06	0.00	0	2.98	0.00	0.00	0.00	97	0	3
227	3.01	0.05	0.00	0	3.04	0.12	0.06	0.04	97	0	3
231	0.05	0.06	0.00	0	0.05	0.31	0.00	0.00	97	0	3
233	5.82	0.06	0.00	0	0.06	0.00	0.00	0.00	97	0	3
234	22.43	0.31	0.00	0	0.11	0.24	0.18	0.16	97	0	3
235	14.61	0.29	0.00	0	0.43	0.84	0.42	0.20	97	0	3
239	4.27	0.05	0.00	0	0.60	0.00	0.00	0.04	97	0	3
240	18.86	0.41	0.00	0	0.34	0.24	0.12	0.12	97	0	3
241	1.01	0.11	0.00	0	0.47	0.84	0.47	0.00	97	0	3
242	5.36	0.11	0.00	0	0.58	0.24	0.18	0.12	97	0	3
247	5.64	0.09	0.00	0	0.11	0.24	0.12	0.08	97	0	3
249	6.14	0.08	0.00	0	0.09	0.24	0.12	0.08	97	0	3
253	8.67	0.15	0.00	0	0.08	0.12	0.06	0.04	97	0	3
266	13.66	0.21	0.00	0	0.00	0.72	0.06	0.04	97	0	3
277	1.57	0.05	0.00	0	0.00	0.12	0.12	0.08	97	0	3
279	4.03	0.05	0.00	0	0.05	0.00	0.00	0.02	97	0	3
283	5.46	0.53	0.03	5	0.05	0.84	0.78	0.60	97	0	3
290	17.71	1.11	0.10	7	0.00	0.48	0.30	0.28	97	0	3
294	2.50	0.09	0.00	0	1.11	0.24	0.18	0.16	97	0	3
295	8.22	0.70	0.00	0	1.20	0.36	0.30	0.24	97	0	3
296	10.16	0.11	0.00	0	0.80	0.12	0.06	0.04	97	0	3
298	12.00	0.10	0.00	0	0.90	0.24	0.12	0.09	97	0	3
300	2.03	0.06	0.00	0	0.91	0.12	0.06	0.04	97	0	3
301	3.97	0.08	0.00	0	0.28	0.12	0.06	0.04	97	0	3
302	21.35	0.21	0.00	0	0.26	0.24	0.29	0.20	97	0	3
303	3.30	0.13	0.00	0	0.47	0.36	0.30	0.20	97	0	3
306	24.50	0.39	0.08	22	0.42	0.24	0.16	0.12	97	0	3

HAWAII SITE: HONOKAA

YEAR: 1977

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)		--RUNOFF-- (IN)		ANT. MOISTURE (%)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES (IN/HR)			AVG NO.	CURVE INDEX	EROSION CROP CODE	
		5	10	15	30			5	10	15				
307	2.70	0.25	0.00	0.72	0.36	0.36	0.24	0.12	0.10	0.03	89	0	3	
313	4.17	0.12	0.00	0.00	0.00	0.06	0.04	0.04	0.03	0.03	94	0	3	
316	3.48	0.07	0.00	0.12	0.36	0.18	0.12	0.06	0.03	0.02	97	0	3	
318	3.10	0.17	0.01	7.	0.20	0.60	0.30	0.24	0.14	0.09	0.05	96	0	3
338	21.47	1.94	W	W	0.00	1.20	1.08	0.92	0.76	0.57	0.09	51	9	4
343	13.99	0.74	0.00	0.94	0.60	0.42	0.28	0.18	0.13	0.05	73	0	4	
349	0.74	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	59	0	4	
350	21.67	0.94	0.00	0.02	0.72	0.66	0.64	0.48	0.33	0.04	68	2	4	
355	11.26	0.06	0.00	0.94	0.00	0.00	0.00	0.00	0.02	0.01	97	0	4	
359	8.67	0.08	0.00	0.06	0.48	0.30	0.20	0.00	0.00	0.01	96	0	4	
365	0.47	0.07	0.00	0.00	0.36	0.18	0.20	0.00	0.00	0.15	97	0	4	

HAWAII SITE: WAIALUA SUGAR

YEAR: 1972

TIME INTERVAL (MIN) AND

MAXIMUM RAINFALL INTENSITIES

STORM DAY	JULIAN DAY	LENGTH (HRS)	RAIN - RUNOFF--		ANT. MOISTURE (IN)		TIME INTERVAL (MIN) AND (IN/HR)		AVG INT	INT NO	CLOUD INDEX	EROSION DROP CODE
			RAIN (IN)	RUNOFF (IN)	5	10	15	30				
48	15.42	1.20	0.01	0	0.00	1.20	0.60	0.40	0.20	0.20	0.07	66
53	3.92	1.10	0.05	5	1.20	3.60	2.40	2.40	1.60	0.90	0.57	75
53	9.17	0.80	0.06	3	1.10	1.20	0.60	0.40	0.40	0.20	0.10	83
54	3.33	0.40	0.00	0	1.90	1.20	0.60	0.60	0.40	0.20	0.12	83
55	11.67	0.50	0.00	0	2.30	0.00	1.20	0.00	0.00	0.00	0.04	80
62	19.58	1.80	0.00	0	0.00	1.20	0.60	0.80	0.60	0.50	0.09	53
66	3.17	0.20	0.00	0	1.80	0.00	0.00	0.00	0.00	0.00	0.06	91
82	6.75	0.50	0.00	0	0.00	0.00	0.00	0.00	0.40	0.20	0.20	80
87	2.17	0.60	0.00	1	0.50	2.40	1.80	1.20	0.80	0.50	0.80	82
88	8.92	0.60	0.01	2	0.60	1.20	0.60	0.80	0.60	0.30	0.08	83
89	2.00	0.20	0.00	0	1.20	0.00	0.00	0.00	0.00	0.00	0.10	91
92	5.08	0.20	0.00	0	1.40	0.00	0.00	0.00	0.00	0.00	0.04	91
98	18.42	1.10	0.02	1	0.00	1.20	0.60	0.40	0.40	0.20	0.07	71
99	27.25	0.60	0.01	2	1.10	0.00	0.60	0.40	0.20	0.10	0.03	83
102	2.33	0.20	0.00	0	1.70	0.00	0.00	0.00	0.00	0.00	0.08	91
104	27.33	4.10	0.35	9	0.80	3.60	3.00	2.80	1.80	1.10	0.15	50
106	12.75	0.20	0.00	0	4.30	0.00	0.00	0.00	0.00	0.00	0.02	91
108	3.92	0.70	0.02	2	4.30	1.20	0.60	0.40	0.40	0.30	0.18	80
117	14.17	0.40	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.03	65
119	8.42	0.30	0.00	0	0.40	0.00	0.00	0.00	0.00	0.00	0.04	87
130	3.00	0.80	0.01	1	0.00	2.40	1.80	1.20	0.60	0.50	0.27	75
143	39.08	0.40	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.01	83
155	1.00	0.60	0.00	0	0.00	1.20	0.60	0.80	0.80	0.50	0.80	79
155	0.50	0.30	0.00	0	0.60	1.20	1.20	0.80	0.40	0.00	1.76	89
175	84.50	0.30	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	87
189	38.58	0.30	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	87
191	20.25	0.30	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.01	87
195	4.50	0.20	0.00	0	0.60	0.00	0.00	0.00	0.00	0.00	0.05	67
197	4.42	1.00	0.00	0	0.00	0.50	2.40	1.80	1.20	0.80	0.70	70
215	1.50	0.20	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.02	91
222	6.50	0.30	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.05	67
223	9.42	0.50	0.00	0	0.30	1.20	0.60	0.40	0.40	0.20	0.05	80
230	38.92	0.40	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.01	83
233	20.92	0.90	0.00	0	0.00	0.40	0.00	0.00	0.40	0.30	0.04	69
239	2.42	0.40	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.17	83
242	21.08	0.60	0.00	0	0.40	0.00	0.00	0.00	0.00	0.20	0.03	77
247	19.67	0.90	0.00	0	0.60	0.00	0.00	0.00	0.00	0.10	0.05	69
271	4.08	0.40	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83

HAWAII SITE: WAIALUA SUGAR

YEAR: 1972

STORM DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)				AVG INT	CURVE EROSION INDEX NO	CROP CODE
					5	10	15	30			
275	0.42	0.20	0.00	0	0.40	0.00	0.00	0.00	0.48	91	0
277	25.58	2.10	0.02	1	0.60	1.20	1.80	1.60	1.00	0.80	0.08
300	0.25	0.20	0.00	0	0.00	0.00	0.40	0.00	0.00	0.80	91
302	13.42	3.00	0.01	0	0.20	2.40	1.80	1.60	1.20	1.00	0.22
306	3.67	0.20	0.00	0	3.00	0.00	0.00	0.00	0.00	0.00	0.12
309	5.75	0.20	0.00	0	0.20	0.00	0.00	0.00	0.00	0.00	0.03
311	28.75	2.10	0.01	0	0.40	1.20	0.60	0.40	0.20	0.30	0.07
313	9.50	0.20	0.00	0	2.30	0.00	0.00	0.00	0.00	0.02	91
314	5.75	0.30	0.00	0	2.50	0.00	0.00	0.00	0.10	0.06	88
314	11.25	0.50	0.00	1	2.60	1.20	0.60	0.40	0.20	0.20	0.06
316	7.75	0.20	0.00	0	3.10	0.00	0.00	0.00	0.00	0.03	91
330	7.08	1.40	0.01	0	0.00	1.20	0.60	0.40	0.40	0.23	62
334	0.75	0.20	0.00	0	1.40	0.00	0.00	0.00	0.00	0.27	91
335	66.42	0.20	0.00	0	1.60	0.00	0.00	0.00	0.00	0.00	92
343	5.58	0.60	W	W	0.00	1.20	0.60	0.40	0.20	0.11	77
351	53.50	3.00	W	W	0.00	1.20	0.60	0.40	0.30	0.06	40
366	2.83	0.60	W	W	0.00	0.60	0.40	0.20	0.20	0.21	77

HAWAII SITE: WAIALUA SUGAR

YEAR: 1973

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			CURVE NO.	EROSION INDEX	CROP CODE
					5	10	15			
6	8.92	0.60	W	0.00	0.00	0.00	0.00	0.10	0.06	77
27	33.83	0.20	W	0.00	0.00	0.00	0.00	0.00	0.01	91
32	18.25	0.40	W	0.20	0.00	0.00	0.00	0.00	0.02	83
34	9.92	0.70	W	0.40	1.20	0.60	0.40	0.20	0.10	0.07
39	12.25	1.20	W	0.70	2.40	1.80	1.20	0.80	0.60	63
43	2.67	0.20	W	1.20	0.00	0.00	0.00	0.00	0.07	91
51	9.25	1.50	W	0.00	0.00	0.60	0.40	0.40	0.16	57
55	16.83	1.00	W	1.50	0.00	0.00	0.00	0.20	0.20	67
62	1.67	0.30	W	0.00	0.00	0.00	0.00	0.20	0.10	87
64	10.00	0.40	W	0.30	0.00	0.00	0.00	0.00	0.04	83
65	32.25	0.60	W	0.70	0.00	0.00	0.00	0.00	0.02	77
69	11.33	1.00	W	1.00	0.00	0.00	0.40	0.20	0.20	67
70	5.75	0.30	W	1.60	0.00	0.00	0.00	0.00	0.05	87
71	14.17	0.20	W	1.90	0.00	0.00	0.00	0.00	0.01	91
76	74.33	0.60	W	0.20	0.00	0.00	0.00	0.00	0.00	77
80	94.17	1.50	W	0.60	0.00	0.00	0.00	0.00	0.02	57
84	28.08	0.70	W	1.50	0.00	0.00	0.00	0.00	0.02	74
87	64.58	1.20	W	0.70	0.00	0.00	0.00	0.00	0.02	63
97	43.67	0.60	W	0.00	0.00	0.00	0.00	0.10	0.01	77
116	14.25	0.60	W	0.00	0.00	0.00	0.00	0.00	0.04	77
117	6.00	0.40	W	0.60	0.00	0.00	0.00	0.00	0.06	83
120	10.75	0.40	W	1.00	0.00	0.00	0.00	0.20	0.10	0.04
123	8.58	0.20	W	0.40	0.00	0.00	0.00	0.00	0.02	91
126	12.75	0.30	W	0.20	0.00	0.00	0.00	0.00	0.02	87
128	21.33	0.70	W	0.50	0.00	0.00	0.00	0.00	0.03	74
131	2.33	0.20	W	1.00	0.00	0.00	0.00	0.00	0.03	74
137	24.58	1.10	W	0.00	0.00	0.00	0.00	0.10	0.04	65
140	13.00	0.80	W	1.10	0.00	0.00	0.40	0.20	0.10	71
141	50.25	0.60	W	1.90	0.00	0.00	0.00	0.00	0.01	77
156	55.42	0.40	W	0.00	0.00	0.00	0.00	0.00	0.00	83
159	97.08	0.40	W	0.40	0.00	0.00	0.00	0.00	0.00	83
182	25.92	1.00	W	0.70	0.00	0.00	0.00	0.20	0.10	0.04
184	15.08	0.50	W	1.70	0.00	0.00	0.00	0.00	0.03	80
186	1.83	0.20	W	2.20	0.00	0.00	0.00	0.00	0.11	91
189	45.58	1.10	W	0.70	0.00	0.00	0.00	0.10	0.02	65

HAWAII SITE: WAIALUA SUGAR

YEAR: 1973

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (IN/HR)	MAXIMUM RAINFALL INTENSITIES (IN/HR)	Avg TIN	CURVE NO.	HUSSON INDEX	CHURP CODE
195	2.50	0.20	W	0.00	0.00	0.00	0.00	91	0	3
197	14.50	0.20	W	0.20	0.00	0.00	0.00	91	0	3
214	33.92	0.30	0.00	0.00	0.00	0.00	0.00	97	0	3
216	4.83	0.40	0.00	0.30	0.00	0.00	0.20	0.10	0.08	3
217	14.17	0.30	0.00	0.70	0.00	0.00	0.00	0.02	37	0
218	15.42	0.30	0.00	1.00	0.00	0.00	0.00	0.02	37	0
219	12.25	0.40	0.00	1.30	0.00	0.60	0.40	0.10	0.05	3
221	15.42	1.00	0.00	1.40	2.40	1.80	1.60	1.40	0.39	0
238	21.58	0.20	0.00	0.00	0.00	0.00	0.00	0.00	91	0
240	23.08	0.50	0.00	0.20	0.00	0.00	0.00	0.02	90	0
244	9.00	0.40	0.00	0.70	0.00	0.00	0.00	0.10	0.06	33
247	14.08	0.50	W	0.40	0.00	0.00	0.00	0.04	30	0
249	7.92	0.30	0.00	0.90	0.00	0.00	0.00	0.04	37	0
318	51.41	0.30	0.00	0.00	0.00	0.00	0.00	0.01	87	0
324	15.08	0.40	0.00	0.00	0.00	0.00	0.00	0.03	33	0
331	19.25	0.20	0.00	0.00	0.00	0.00	0.00	0.01	91	0
334	23.42	2.10	0.05	2.00	1.20	1.20	0.60	0.40	0.15	4

HAWAII SITE: WAIALUA SUGAR

YEAR: 1974

TIME INTERVAL (MIN) 600

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN)	INTENSITIES			AVG IN/H	TIME OF PUSUION (EST) NO. INDEX	TIME
							5	10	15			
58	6.42	0.50	0.00	0.00	0.00	60	0.40	0.40	0.40	0.67	60	0
134	4.67	0.70	0.00	1.00	1.20	60	0.40	0.40	0.40	0.77	0	4
135	7.50	1.00	0.02	2.00	1.70	60	0.80	0.80	0.80	0.73	4	4
136	0.83	0.40	0.00	2.00	2.10	40	1.20	1.20	1.20	1.60	4	4
137	39.08	0.40	0.00	0.00	0.00	60	0.00	0.00	0.00	0.00	2	4
140	1.58	0.30	0.00	1.00	1.80	20	0.60	0.40	0.20	0.00	0	4
155	5.17	0.60	0.00	0.00	1.20	60	0.40	0.40	0.40	0.21	0	4
159	3.92	0.20	0.00	0.00	0.60	60	0.00	0.00	0.00	0.12	0	4
160	9.75	0.30	0.00	0.00	0.80	60	0.00	0.00	0.00	0.05	0	4
165	2.92	0.20	0.00	0.00	0.30	60	0.00	0.00	0.00	0.06	0	4
169	4.75	0.80	0.01	1.00	0.20	20	1.20	1.20	1.20	1.75	3	4
172	21.58	0.40	0.00	0.00	0.80	60	0.00	0.00	0.00	0.02	60	0
174	7.17	0.30	0.00	0.00	1.20	60	0.00	0.00	0.00	0.04	87	0
177	10.00	0.30	0.00	0.00	0.70	60	0.00	0.00	0.00	0.03	87	0
177	57.08	0.30	0.00	0.00	1.00	60	0.00	0.00	0.00	0.01	87	0
192	18.08	0.30	0.00	0.00	0.00	60	0.00	0.00	0.00	0.02	67	0
193	84.50	1.10	0.00	0.00	0.30	60	0.00	0.00	0.00	0.01	65	0
197	8.67	0.40	0.00	0.00	1.40	20	0.00	0.00	0.00	0.05	33	0
198	8.67	4.00	0.06	0.06	1.50	40	2.40	2.40	2.40	5.3	40	4
200	8.00	0.30	0.00	0.00	4.40	60	0.00	0.00	0.00	0.04	87	4
201	9.33	0.70	0.00	0.00	4.70	20	1.20	0.80	0.60	0.49	77	4
223	28.33	0.80	0.00	0.00	0.00	60	0.00	0.00	0.00	0.03	71	4
227	11.08	0.20	0.00	0.00	0.80	60	0.00	0.00	0.00	0.02	74	4
230	6.83	0.20	0.00	0.00	0.20	60	0.00	0.00	0.00	0.03	91	0
245	0.92	0.70	0.00	0.00	1.20	20	0.80	0.80	0.80	0.76	77	4
247	1.25	0.40	0.00	0.00	0.70	20	0.60	0.40	0.40	0.32	83	0
252	0.75	0.80	0.01	1.00	0.40	40	1.80	1.60	1.40	1.60	77	4
255	0.83	0.30	0.00	0.00	0.80	60	0.40	0.40	0.40	0.36	87	4
262	1.42	0.90	0.01	1.00	1.20	20	1.20	1.20	1.00	0.70	63	4
263	0.92	0.20	0.00	1.00	0.90	60	0.00	0.00	0.00	0.61	93	0
276	1.67	0.50	0.00	0.00	0.40	40	1.80	1.60	1.40	0.30	60	4
279	52.83	0.40	0.00	0.00	0.50	60	0.00	0.00	0.00	0.00	83	0
286	0.03	0.20	0.00	0.00	0.40	20	0.00	0.00	0.00	0.50	91	0
288	0.42	0.20	0.00	0.00	0.20	60	0.00	0.00	0.00	0.48	91	4
291	11.08	1.10	0.00	0.00	0.40	60	0.40	0.40	0.40	0.20	67	4
293	3.33	0.60	0.01	2.10	1.30	20	0.60	0.40	0.40	0.18	82	4
300	23.33	1.30	0.00	1.00	0.00	60	0.00	0.00	0.00	0.06	65	1
303	24.67	0.30	0.00	0.00	1.30	60	0.00	0.00	0.00	0.01	87	0

HAWAII SITE: WAIANAE SUGAR

YEAR: 1974

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)		--RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND		CURVE NO.	AVG INT.	EROSION CROP INDEX
		(IN)	(IN)	(%)	(%)			(IN/HR)	(IN/HR)			
319	0.67	0.30	W	W	W	0.00	1.20	0.00	0.00	0.45	87	0
319	15.83	1.80	W	W	W	0.30	1.20	1.20	0.80	0.40	0.11	57
324	11.83	0.50	W	W	W	2.10	1.20	0.60	0.40	0.10	0.04	80
324	15.58	2.10	0.17	8	0.50	1.20	1.20	0.80	0.40	0.14	66	7
325	5.91	1.30	0.30	23	2.60	1.20	1.20	1.20	1.00	0.80	0.33	84
360	6.82	0.91	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99
361	4.71	0.15	0.01	3	0.01	0.36	0.24	0.16	0.12	0.07	0.03	95
362	1.50	0.03	0.00	0	0.16	0.00	0.00	0.00	0.00	0.02	0.02	99
365	10.41	0.27	0.02	2	0.19	0.36	0.24	0.20	0.16	0.09	0.03	94
											0	1

HAWAII SITE: WAIALLUA SUGAR

YEAR: 1975

STORM DAY	JULIAN LENGTH	RAIN --RUNOFF--		ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)					CROP CODE
		IN	%		5	10	15	30	60	
3	19.83	0.70	0.22	31.	0.00	1.32	0.90	0.64	0.44	0.04
4	6.43	0.11	0.00	0.	0.70	0.00	0.08	0.04	0.02	0.02
4	0.09	0.04	0.00	0.	0.81	0.31	0.00	0.00	0.00	0.40
5	6.55	0.24	0.00	0.	0.84	0.24	0.18	0.12	0.08	0.04
5	15.14	0.23	0.00	0.	1.08	0.36	0.18	0.20	0.12	0.09
5	18.89	0.56	0.17	30.	1.31	0.60	0.36	0.36	0.30	0.15
6	23.95	0.64	0.18	29.	1.88	0.48	0.36	0.28	0.18	0.15
7	13.41	0.55	0.19	35.	2.52	0.60	0.42	0.36	0.24	0.18
10	4.92	0.06	0.00	0.	2.22	0.00	0.06	0.04	0.02	0.01
11	12.34	0.70	0.23	33.	1.81	0.60	0.60	0.44	0.34	0.30
11	18.32	2.33	0.97	42.	1.95	1.20	1.20	0.88	0.72	0.42
24	24.50	2.00	0.38	19.	0.00	0.72	0.48	0.40	0.32	0.27
29	5.77	0.14	0.00	0.	2.00	1.00	0.04	0.02	0.01	0.02
30	29.85	2.29	0.79	35.	0.14	2.76	2.34	2.08	1.58	0.91
31	23.15	5.00	2.82	56.	2.43	2.40	1.68	1.44	1.28	0.98
33	3.48	0.12	0.02	17.	7.43	0.36	0.30	0.20	0.10	0.06
33	7.97	0.78	0.24	30.	7.55	1.32	1.26	1.12	0.66	0.59
35	7.06	0.17	0.00	0.	8.19	0.24	0.12	0.08	0.10	0.08
35	1.47	0.02	0.00	0.	6.07	0.00	0.00	0.00	0.00	0.02
147	0.62	0.03	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.05
155	0.58	0.03	0.00	0.	0.00	0.00	0.00	0.04	0.02	0.00
160	0.68	0.03	0.00	0.	0.00	0.03	0.00	0.00	0.00	0.04
161	6.48	0.18	0.00	0.	0.03	0.24	0.12	0.12	0.06	0.03
162	1.60	0.04	0.00	0.	0.20	0.00	0.00	0.00	0.02	0.02
164	21.31	0.17	0.00	0.	0.24	0.24	0.12	0.08	0.04	0.03
165	6.71	0.06	0.00	0.	0.40	0.00	0.12	0.08	0.04	0.02
166	11.17	0.07	0.00	0.	0.45	0.04	0.00	0.00	0.02	0.00
168	7.09	0.14	0.00	0.	0.31	0.00	0.18	0.12	0.06	0.03
175	5.19	0.03	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.01
177	21.40	0.05	0.00	0.	0.03	0.00	0.00	0.00	0.02	0.01
178	16.19	0.06	0.00	0.	0.08	0.00	0.00	0.00	0.00	0.00
179	19.84	0.15	0.00	0.	0.15	0.24	0.12	0.16	0.10	0.07
180	10.09	0.05	0.00	0.	0.30	0.00	0.00	0.00	0.04	0.01
182	8.17	0.14	0.00	0.	0.32	0.12	0.06	0.04	0.02	0.03
182	2.16	0.05	0.00	0.	0.41	0.00	0.00	0.00	0.04	0.03
188	4.09	0.06	0.00	0.	0.00	0.12	0.06	0.04	0.04	0.02
188	6.48	0.29	0.00	0.	0.06	0.36	0.18	0.12	0.10	0.08
189	3.18	0.06	0.00	0.	0.35	0.11	0.00	0.00	0.01	0.02

HAWAII SITE: WAIALUA SUGAR

YEAR: 1975

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)		--RUNOFF-- (IN)		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			CLOUD INDEX NO.	FRICTION COEFF. CODE
		5	10	15	30			5	10	15		
190	11.39	0.03	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	98	0
191	15.92	0.09	0.00	0.45	0.24	0.12	0.08	0.06	0.05	0.01	95	0
192	17.93	0.29	0.00	0.55	0.60	0.42	0.28	0.14	0.07	0.02	88	0
193	3.07	0.07	0.00	0.84	0.12	0.06	0.04	0.02	0.01	0.03	96	0
194	14.21	0.31	0.00	0.56	0.36	0.30	0.24	0.18	0.14	0.02	86	0
198	4.77	0.03	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.01	99	0
198	15.29	0.55	0.00	0.34	0.48	0.36	0.32	0.22	0.15	0.04	79	0
199	15.34	0.69	0.00	0.89	0.36	0.36	0.24	0.16	0.10	0.05	74	0
200	2.41	0.06	0.00	1.27	0.00	0.12	0.08	0.06	0.03	0.03	97	0
205	3.02	0.05	0.00	0.06	0.00	0.00	0.00	0.02	0.01	0.02	97	0
212	2.85	0.13	0.00	0.00	0.24	0.12	0.12	0.10	0.08	0.05	94	0
215	5.90	0.03	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	99	0
220	2.34	0.04	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.01	97	0
221	18.25	0.12	0.00	0.04	0.12	0.06	0.04	0.02	0.03	0.00	94	0
223	2.90	0.08	0.00	0.16	0.00	0.00	0.00	0.04	0.03	0.03	96	0
226	20.18	0.19	0.00	0.20	0.12	0.06	0.04	0.06	0.04	0.00	91	0
229	10.89	0.19	0.00	0.19	0.12	0.12	0.12	0.08	0.08	0.02	91	0
231	3.31	0.36	0.00	0.38	1.44	0.96	0.76	0.42	0.30	0.11	85	1
232	6.99	0.02	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	99	0
233	1.86	0.03	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.02	98	0
234	3.81	0.04	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.01	98	0
235	9.40	0.06	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	97	0
239	4.55	0.03	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	99	0
241	9.23	0.03	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	99	0
241	12.39	0.16	0.00	0.06	0.24	0.12	0.12	0.06	0.05	0.01	93	0
251	6.87	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	98	0
251	4.29	0.04	0.00	0.05	0.24	0.00	0.00	0.00	0.00	0.00	98	0
254	1.99	0.05	0.00	0.08	0.00	0.06	0.04	0.02	0.01	0.03	97	0
259	9.09	0.12	0.00	0.05	0.12	0.06	0.08	0.04	0.02	0.01	94	0
262	0.69	0.04	0.00	0.12	0.08	0.00	0.00	0.00	0.00	0.05	98	0
266	4.22	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.01	99	0
273	4.21	0.10	0.00	0.00	0.12	0.12	0.08	0.08	0.04	0.05	90	0
289	1.42	0.05	0.00	0.00	0.00	0.12	0.11	0.00	0.04	0.01	95	0
290	21.34	0.25	0.00	0.05	0.12	0.12	0.12	0.06	0.03	0.01	89	0
291	13.86	0.21	0.00	0.29	0.24	0.12	0.08	0.08	0.04	0.05	90	0
292	11.51	1.97	0.12	6.50	2.04	1.86	1.76	1.24	0.82	0.20	65	21
297	0.27	0.04	0.00	1.97	0.12	0.06	0.04	0.00	0.00	0.13	98	0
298	2.75	0.08	0.00	0.04	0.00	0.00	0.00	0.04	0.03	0.03	96	0

HAWAII SITE: WAIALUA SUGAR

YEAR: 1975

STORM JULIAN DAY	LENGTH (HRS)	RAIN		--RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES			AVG IN	PURITY	ELOSION CROP INDEX	CROP CODE	
		(IN)	(IN)	(%)	(IN)			(IN)	(IN)	(IN)					
299	12.04	0.11	0.00	0	0.12	0.24	0.12	0.08	0.04	0.04	0.00	95	0	3	
301	5.83	0.03	0.00	0	0.22	0.00	0.00	0.00	0.00	0.00	0.01	98	0	3	
307	14.24	0.13	0.00	0	0.00	0.34	0.24	0.16	0.08	0.04	0.00	94	0	3	
308	3.40	0.04	0.00	0	0.13	0.00	0.00	0.00	0.00	0.00	0.01	98	0	3	
309	3.90	0.05	0.00	0	0.16	0.00	0.00	0.00	0.00	0.00	0.01	98	0	3	
309	2.23	0.06	0.00	0	0.21	0.12	0.06	0.08	0.04	0.03	0.08	97	0	3	
310	1.88	0.06	0.00	0	0.27	0.00	0.00	0.00	0.00	0.01	0.01	97	0	3	
311	7.95	0.34	0.00	0	0.34	0.36	0.18	0.12	0.10	0.07	0.04	95	0	3	
312	17.09	0.38	0.00	0	0.67	0.12	0.12	0.16	0.08	0.09	0.02	84	0	3	
313	11.56	0.33	0.00	0	0.93	0.60	0.48	0.32	0.20	0.14	0.03	86	0	3	
314	8.39	0.05	0.00	0	1.22	0.00	0.00	0.04	0.04	0.03	0.00	97	0	3	
315	1.92	0.75	0.26	0.00	0	1.23	0.12	0.12	0.08	0.04	0.04	0.01	89	0	3
316	0.48	0.03	0.00	0	1.36	0.00	0.00	0.00	0.00	0.00	0.05	99	0	3	
320	4.53	0.04	0.00	0	0.28	0.00	0.00	0.00	0.02	0.01	0.01	98	0	3	
323	5.23	0.03	0.00	0	0.04	0.09	0.09	0.00	0.00	0.00	0.01	98	0	3	
324	0.02	0.06	0.00	0	0.07	0.14	0.00	0.00	0.00	0.00	0.19	97	0	3	
325	13.18	0.10	0.00	0	0.14	0.12	0.06	0.04	0.02	0.01	0.00	95	0	3	
327	6.00	0.76	0.05	7	0.20	0.84	0.78	0.76	0.60	0.39	0.38	83	3	3	
328	12.33	1.51	0.20	13	0.96	1.68	1.38	1.28	0.68	0.45	0.14	76	8	3	
328	33.33	5.89	1.46	25	2.43	2.28	2.04	1.76	1.50	1.03	0.19	55	72	3	
330	2.80	0.12	0.04	32	8.26	0.60	0.36	0.32	0.18	0.10	0.06	99	0	3	
330	30.22	3.78	1.04	27	8.28	2.76	1.74	1.36	0.78	0.59	0.13	67	23	3	
335	0.26	0.06	0.00	0	3.90	0.17	0.12	0.14	0.00	0.00	0.25	97	0	3	
336	7.35	0.21	0.07	34	0.06	0.48	0.36	0.36	0.18	0.09	0.04	98	0	3	
338	11.87	0.12	0.00	0	0.27	0.12	0.06	0.08	0.06	0.03	0.01	95	0	3	
342	9.33	0.53	0.15	28	0.12	0.96	0.84	0.68	0.36	0.24	0.07	94	-	3	
346	19.98	2.95	0.79	27	0.53	3.00	2.22	1.76	1.34	0.74	0.17	72	33	0	
351	14.87	0.08	0.00	0	2.95	0.00	0.00	0.00	0.02	0.01	0.01	96	-	3	

HAWAII SITE: WAIALUA SUGAR

YEAR: 1976

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (IN/HR)			AVG. CROP CODE
					5	10	15	
1	0.06	0.04	0.00	0.00	0.23	0.00	0.00	0.65
1	12.42	0.05	0.00	0.04	0.00	0.00	0.00	0.00
2	8.75	0.23	0.00	0.09	0.48	0.30	0.24	0.14
3	0.05	0.03	0.00	0.32	0.25	0.00	0.00	0.03
6	0.86	0.04	0.00	0.35	0.00	0.00	0.04	0.02
6	11.20	0.17	0.00	0.30	0.12	0.06	0.04	0.04
6	10.28	0.10	0.00	0.21	0.24	0.12	0.08	0.04
15	11.72	0.18	0.00	0.00	0.36	0.18	0.12	0.06
17	8.02	0.08	0.00	0.18	0.12	0.06	0.08	0.04
20	3.53	0.02	0.00	0.26	0.00	0.00	0.00	0.00
30	15.57	1.46	0.17	1.2	0.00	1.08	1.02	1.00
33	9.56	0.10	0.00	0.	1.46	0.24	0.12	0.12
36	20.69	3.57	0.86	24.	0.10	2.52	2.04	1.72
36	19.26	2.51	0.56	22.	3.67	1.32	0.96	0.64
45	16.54	0.16	0.00	0.	0.00	0.36	0.18	0.12
45	16.67	0.49	0.06	13.	0.16	0.48	0.42	0.28
46	25.43	0.31	0.03	9.	0.65	0.12	0.12	0.08
48	6.84	0.04	0.00	0.	0.96	0.12	0.00	0.00
49	10.03	0.30	0.00	1.	1.00	0.24	0.18	0.20
51	12.79	0.15	0.00	0.	0.65	0.18	0.06	0.04
52	21.58	0.91	0.05	6.	0.49	0.36	0.30	0.24
54	13.79	0.55	0.05	9.	1.36	0.72	0.54	0.40
59	3.84	0.15	0.00	0.	0.55	0.36	0.30	0.20
61	13.09	1.22	0.12	10.	0.15	1.08	1.08	1.04
64	26.18	0.25	0.00	0.	1.37	0.24	0.12	0.12
67	21.10	0.14	0.00	0.	0.25	0.12	0.06	0.04
68	22.33	0.09	0.00	0.	0.39	0.00	0.06	0.04
69	10.21	0.75	0.05	6.	0.48	0.72	0.72	0.68
69	10.81	0.44	0.00	1.	0.98	0.24	0.12	0.08
73	21.02	0.07	0.00	0.	1.29	0.24	0.12	0.08
77	5.93	0.10	0.00	0.	0.07	0.48	0.24	0.16
77	15.01	0.71	0.02	3.	0.17	0.72	0.48	0.40
78	8.20	0.25	0.02	7.	0.88	0.36	0.30	0.28
80	12.12	0.12	0.00	0.	1.05	0.00	0.06	0.04
81	19.62	0.25	0.00	0.	1.17	0.36	0.18	0.12
82	21.79	0.19	0.00	0.	1.42	0.11	0.06	0.04
83	10.64	0.48	0.04	9.	0.80	0.24	0.20	0.14
84	12.18	0.31	0.00	0.	1.03	0.24	0.12	0.08

HAWAII SITE: WAIALUA SUGAR	YEAR: 1976	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)										CURVE NO.	EROSION TOLERANCE	
		STORM DAY	STORM LENGTH (HRS)	RAIN (IN)	RUNOFF (IN)	ANT. MOISTURE (%)	INT. (IN)	5	10	15	30	60		
		85	22.39	0.74	0.05	7.	1.34	0.96	0.69	0.44	0.22	0.13	0.03	34
		87	18.87	0.12	0.00	0.	1.72	0.12	0.06	0.04	0.02	0.00	0.00	4
		89	14.29	0.18	0.00	0.	1.18	0.24	0.12	0.08	0.06	0.05	0.01	92
		90	20.92	1.08	0.13	1.2.	1.05	1.44	1.26	0.84	0.42	0.21	0.05	81
		91	19.16	0.50	0.05	1.0.	1.39	0.84	0.42	0.40	0.30	0.17	0.03	90
		92	16.53	0.64	0.09	1.5.	1.89	0.60	0.48	0.36	0.20	0.10	0.04	89
		93	15.21	0.56	0.06	1.1.	2.40	0.84	0.72	0.64	0.38	0.24	0.04	89
		94	6.71	0.04	0.00	0.	2.96	0.00	0.00	0.00	0.00	0.00	0.01	78
		96	8.06	0.05	0.00	0.	1.74	0.00	0.00	0.00	0.00	0.01	0.01	93
		97	21.83	0.16	0.00	0.	1.29	0.48	0.24	0.20	0.10	0.05	0.00	92
		98	25.74	1.31	0.04	3.	0.81	0.36	0.36	0.36	0.28	0.24	0.05	69
		100	16.22	0.17	0.00	0.	1.57	0.12	0.06	0.08	0.04	0.02	0.01	92
		101	5.70	0.04	0.00	0.	1.69	0.00	0.00	0.00	0.00	0.01	0.00	4
		102	3.85	0.06	0.00	0.	1.68	0.00	0.00	0.00	0.02	0.02	0.02	4
		107	13.79	0.70	0.03	4.	0.06	0.36	0.36	0.30	0.26	0.17	0.06	82
		108	15.44	1.12	0.11	10.	0.70	1.20	1.14	0.92	0.70	0.40	0.07	79
		109	7.07	0.07	0.00	0.	1.82	0.00	0.00	0.00	0.02	0.01	0.01	46
		110	11.92	0.07	0.00	0.	1.89	0.00	0.00	0.00	0.00	0.00	0.01	96
		111	13.26	0.21	0.00	0.	1.96	0.24	0.12	0.08	0.06	0.05	0.02	91
		112	12.39	0.79	0.06	7.	2.17	0.48	0.36	0.32	0.20	0.16	0.06	83
		113	16.08	0.36	0.02	6.	2.26	0.24	0.18	0.20	0.14	0.10	0.02	91
		114	10.75	0.45	0.05	1.2.	1.50	0.48	0.36	0.32	0.18	0.12	0.04	91
		117	0.44	0.06	0.00	0.	1.60	0.24	0.18	0.12	0.00	0.00	0.13	97
		118	9.32	0.12	0.00	0.	0.87	0.12	0.06	0.04	0.04	0.02	0.01	94
		119	24.06	1.46	0.12	8.	0.63	0.60	0.48	0.36	0.28	0.18	0.06	73
		120	4.22	0.12	0.00	0.	1.64	0.24	0.18	0.12	0.08	0.06	0.03	94
		122	0.04	0.04	0.00	0.	1.76	0.26	0.00	0.00	0.00	0.00	0.05	98
		125	10.63	0.16	0.00	0.	0.16	0.24	0.18	0.16	0.04	0.01	0.01	93
		130	8.36	0.22	0.00	0.	0.16	0.12	0.06	0.08	0.04	0.03	0.03	90
		132	15.00	0.40	0.00	0.	0.22	0.24	0.16	0.14	0.11	0.03	0.03	83
		137	5.21	0.14	0.00	0.	0.40	0.12	0.08	0.06	0.04	0.03	0.01	94
		138	19.62	0.12	0.00	0.	0.54	0.00	0.00	0.04	0.04	0.02	0.01	94
		139	12.86	0.25	0.00	0.	0.26	0.24	0.12	0.08	0.04	0.02	0.02	89
		140	22.75	0.19	0.00	0.	0.50	0.24	0.12	0.08	0.04	0.02	0.00	91
		142	4.43	0.53	0.00	2.	0.69	0.94	0.78	0.60	0.32	0.25	0.12	84
		142	8.53	0.19	0.00	0.	1.08	0.24	0.12	0.08	0.04	0.03	0.02	91
		143	10.21	0.28	0.00	3.	1.26	0.24	0.18	0.16	0.10	0.08	0.03	92
		146	0.75	0.12	0.00	0.	1.18	0.36	0.18	0.20	0.16	0.09	0.16	94

HAWAII SITE: WAIALUA SUGAR

YEAR: 1976

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)		TIME INTERVAL (MIN) AND INTENSITIES		CURVE FROSTON CEEF INDEX	CURVE FROSTON CEEF CODE
					5	10	15	30		
147	5.10	0.07	0.00	0.	1.11	0.09	0.04	0.02	0.02	4
147	6.93	0.13	0.00	0.	0.48	0.09	0.24	0.16	0.05	4
149	12.50	0.10	0.00	0.	0.33	0.24	0.18	0.12	0.06	4
150	9.22	0.25	0.00	0.	0.43	0.48	0.36	0.28	0.14	4
155	4.28	0.12	0.00	0.	0.25	0.12	0.12	0.10	0.08	4
156	5.12	0.10	0.00	0.	0.12	0.36	0.24	0.20	0.10	4
161	4.26	0.05	0.00	0.	0.10	0.05	0.00	0.00	0.02	4
161	14.39	0.24	0.00	0.	0.05	0.12	0.12	0.08	0.03	4
166	27.20	0.21	0.00	0.	0.29	0.24	0.12	0.12	0.06	4
168	7.95	0.24	0.00	0.	0.21	0.60	0.36	0.24	0.16	4
169	17.17	0.07	0.00	0.	0.45	0.18	0.06	0.04	0.02	4
170	12.70	0.32	0.00	0.	0.53	0.24	0.24	0.20	0.14	4
173	4.56	0.09	0.00	0.	0.64	0.12	0.06	0.04	0.04	4
174	5.35	0.05	0.00	0.	0.49	0.09	0.00	0.00	0.00	4
178	16.94	0.06	0.00	0.	0.14	0.00	0.00	0.00	0.01	4
182	4.62	0.03	0.00	0.	0.06	0.00	0.00	0.00	0.00	4
183	24.32	0.21	0.00	0.	0.09	0.12	0.06	0.04	0.02	4
185	17.00	0.13	0.00	0.	0.23	0.12	0.12	0.08	0.04	4
186	0.29	0.06	0.00	0.	0.36	0.18	0.00	0.08	0.00	4
191	0.17	0.03	0.00	0.	0.06	0.00	0.06	0.00	0.00	4
192	4.28	0.26	0.00	0.	0.03	0.24	0.30	0.28	0.22	4
193	3.86	0.11	0.00	0.	0.29	0.24	0.18	0.12	0.06	4
197	2.53	0.18	0.00	0.	0.37	0.24	0.12	0.12	0.11	4
199	3.44	0.07	0.00	0.	0.18	0.12	0.12	0.08	0.06	4
200	7.04	0.22	0.00	0.	0.25	0.60	0.54	0.36	0.02	4
200	5.80	0.06	0.00	0.	0.47	0.00	0.00	0.00	0.02	4
201	19.46	0.99	0.00	0.	0.53	0.60	0.48	0.40	0.34	4
203	18.07	0.17	0.00	0.	1.34	0.00	0.06	0.04	0.04	4
204	6.58	0.16	0.00	0.	1.51	0.12	0.06	0.08	0.06	4
205	0.98	0.04	0.00	0.	1.60	0.00	0.00	0.00	0.01	4
206	13.99	0.43	0.00	0.	1.35	0.12	0.06	0.08	0.08	4
208	9.99	0.19	0.00	0.	0.80	0.24	0.12	0.08	0.06	4
210	23.25	0.13	0.00	0.	0.65	0.12	0.06	0.04	0.02	4
219	12.63	0.28	0.00	0.	0.00	0.24	0.24	0.20	0.14	4
221	7.23	0.06	0.00	0.	0.28	0.12	0.00	0.00	0.01	4
224	10.47	0.15	0.00	0.	0.34	0.12	0.18	0.12	0.06	4
225	28.73	0.18	0.00	0.	0.21	0.24	0.12	0.06	0.04	4
229	18.14	0.20	0.00	0.	0.32	0.12	0.06	0.08	0.06	4

HAWAII SITE: WAIALLA SUGAR

YEAR: 1976

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES

JULIAN DAY	STORM LENGTH (HRS)	RAIN - RUNOFF		ANT. MOISTURE		AVG INT/HR	CLOUD INDEX	EUSTON CODE	TOP CODE
		(IN)	(IN)	(IN)	(IN)				
232	5.58	0.31	0.00	0.20	0.60	0.30	0.40	0.32	0.18
234	3.60	0.04	0.00	0.51	0.00	0.00	0.00	0.01	0.04
238	20.08	0.14	0.00	0.04	0.60	0.48	0.32	0.18	0.00
239	21.45	0.56	0.00	0.18	0.72	0.48	0.40	0.26	0.15
240	4.52	0.20	0.00	0.70	0.36	0.30	0.20	0.18	0.11
241	12.53	0.05	0.00	0.90	0.12	0.06	0.04	0.02	0.01
244	13.79	0.02	0.00	0.81	0.00	0.00	0.00	0.00	0.00
248	19.96	0.12	0.00	0.02	0.48	0.24	0.16	0.08	0.04
249	13.71	0.04	0.00	0.14	0.00	0.00	0.00	0.00	0.00
251	0.07	0.04	0.00	0.16	0.19	0.00	0.00	0.00	0.00
253	19.68	0.55	0.00	1.0	0.19	1.32	1.14	1.00	0.68
254	17.58	0.19	0.00	0.62	0.48	0.30	0.20	0.10	0.06
255	14.75	0.19	0.00	0.77	0.60	0.30	0.32	0.17	0.01
256	7.88	0.10	0.00	0.96	0.00	0.00	0.00	0.06	0.00
261	6.24	0.18	0.00	0.10	0.24	0.12	0.16	0.08	0.03
265	6.73	0.11	0.00	0.18	0.12	0.06	0.04	0.04	0.03
265	13.26	0.14	0.00	0.29	0.12	0.06	0.04	0.04	0.03
269	4.08	0.27	0.00	0.25	0.48	0.30	0.20	0.12	0.10
271	13.71	0.20	0.00	0.27	0.24	0.18	0.12	0.08	0.04
272	15.66	0.12	0.00	0.47	0.36	0.18	0.12	0.06	0.03
274	0.35	0.18	0.00	0.59	0.72	0.60	0.44	0.00	0.00
278	16.14	0.57	0.01	1.0	0.18	0.84	0.78	0.76	0.56
280	8.46	0.20	0.00	0.57	0.24	0.12	0.08	0.04	0.04
283	1.42	0.05	0.00	0.77	0.12	0.06	0.08	0.04	0.02
285	15.71	0.21	0.00	0.25	0.24	0.18	0.12	0.08	0.05
287	3.41	0.52	0.00	2.0	0.27	1.08	1.08	0.88	0.74
287	6.43	0.09	0.00	0.00	0.79	0.12	0.06	0.04	0.02
288	18.03	0.46	0.00	0.88	0.24	0.18	0.16	0.12	0.08
294	0.08	0.04	0.00	0.00	0.24	0.00	0.00	0.00	0.00
312	13.32	0.13	0.00	0.00	0.00	0.06	0.04	0.02	0.01
318	10.17	0.08	0.00	0.00	0.00	0.00	0.08	0.06	0.04
320	21.47	1.14	0.00	0.08	0.36	0.30	0.24	0.22	0.18
323	29.70	0.73	0.00	0.00	1.23	0.24	0.18	0.16	0.14
325	25.24	0.07	0.00	0.00	1.87	0.00	0.00	0.00	0.00
329	5.17	0.06	0.00	0.00	0.07	0.12	0.06	0.04	0.02
330	5.00	0.41	0.00	1.0	0.14	0.60	0.60	0.48	0.38
340	18.32	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
341	27.85	0.18	0.00	0.05	0.24	0.12	0.08	0.06	0.05

HAWAII SITE: WAIALUA SUGAR

YEAR: 1976

STORM NUMBER	JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES			CLOUD NO.	IMEX CODE	CLOUD NO.	IMEX CODE
							5	10	15				
350	6.36	0.09	0.00	0.	0.00	0.12	0.12	0.08	0.04	0.01	0.02	0	4
365	8.97	0.26	0.00	0.	0.00	0.24	0.18	0.20	0.16	0.11	0.05	0	4

HAWAII SITE: WAIALUA SUGAR

YEAR: 1977

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)				CURVE NO.	FROSTON INDEX	DROP CODE
					5	10	15	30			
1	12.10	0.17	0.00	0.00	0.12	0.06	0.04	0.04	0.01	92	0
8	7.02	0.07	0.00	0.00	0.24	0.24	0.16	0.08	0.01	97	0
12	4.25	0.04	0.00	0.07	0.00	0.00	0.04	0.04	0.02	0.01	4
20	1.19	0.21	0.00	1.00	0.60	0.60	0.56	0.28	0.19	0.18	4
25	5.34	0.22	0.00	0.21	0.24	0.18	0.16	0.10	0.08	0.04	4
27	11.37	0.43	0.01	3.00	0.22	0.36	0.30	0.28	0.24	0.22	4
31	8.98	0.22	0.01	4.00	0.43	0.24	0.18	0.16	0.16	0.02	4
34	5.07	0.17	0.00	2.00	0.22	0.36	0.36	0.28	0.22	0.13	4
37	1.69	0.04	0.00	0.40	0.17	0.00	0.00	0.00	0.01	0.02	4
45	25.00	1.42	0.04	4.00	0.00	0.96	0.84	0.56	0.38	0.20	4
47	14.84	0.18	0.01	6.00	1.42	0.24	0.24	0.24	0.12	0.07	4
60	12.65	0.50	0.00	0.00	0.00	0.36	0.36	0.28	0.20	0.09	4
61	16.31	0.23	0.00	0.00	0.50	0.24	0.12	0.08	0.04	0.04	4
62	22.46	0.34	0.01	2.00	0.73	0.36	0.18	0.12	0.06	0.06	4
64	17.05	0.38	0.01	3.00	1.07	0.36	0.36	0.24	0.18	0.13	4
65	12.96	0.15	0.00	0.00	1.45	0.12	0.06	0.04	0.06	0.04	4
67	22.54	0.12	0.00	0.00	0.88	0.00	0.00	0.00	0.02	0.01	4
70	22.14	0.48	0.00	0.00	0.27	0.24	0.12	0.08	0.10	0.07	4
71	21.29	1.10	0.02	2.00	0.60	0.96	0.90	0.60	0.30	0.18	4
73	7.12	0.15	0.00	0.00	1.58	0.24	0.12	0.08	0.10	0.06	4
74	17.94	0.38	0.00	0.00	1.73	0.36	0.36	0.24	0.16	0.13	4
76	16.57	0.20	0.00	0.00	1.63	0.12	0.12	0.08	0.06	0.05	4
77	5.88	0.10	0.00	0.00	0.73	0.00	0.06	0.04	0.08	0.05	4
77	16.47	0.53	0.00	2.00	0.83	0.84	0.54	0.36	0.20	0.14	4
78	16.81	1.35	0.02	2.00	1.36	1.44	1.20	0.89	0.76	0.44	4
79	17.58	0.23	0.00	1.00	2.56	0.48	0.30	0.20	0.10	0.05	4
80	17.92	0.23	0.00	0.00	2.41	0.24	0.18	0.12	0.08	0.05	4
81	4.03	0.09	0.00	0.00	2.65	0.12	0.06	0.04	0.02	0.02	4
81	7.07	0.06	0.00	0.00	2.54	0.19	0.00	0.00	0.00	0.00	4
83	5.26	0.31	0.01	2.00	1.96	0.48	0.42	0.32	0.20	0.16	4
86	24.46	0.35	0.00	1.00	4.46	0.60	0.54	0.44	0.22	0.10	4
88	5.23	1.15	0.03	3.00	0.66	2.52	1.92	1.76	1.64	0.98	4
89	0.63	0.03	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.04	4
92	7.68	0.13	0.00	0.00	1.52	0.24	0.24	0.04	0.02	0.02	4
94	4.80	0.08	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.02	4
96	19.27	0.09	0.00	0.00	0.22	0.00	0.00	0.00	0.01	0.00	4
97	7.60	0.22	0.00	0.00	0.31	0.12	0.06	0.08	0.05	0.03	4
100	21.22	0.08	0.00	0.00	0.32	0.00	0.00	0.00	0.01	0.00	4

HAWAII SITE: WAIALUA SUGAR

YEAR: 1977

JULIAN DAY	STORM LENGTH (HRS)	RAIN --RUNOFF--		ANT. MOISTURE		MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) (ANL)	MAXIMUM RAINFALL INTENSITIES (IN/HR)	AVG	CLOUD LINE X	ESTIMATED CLOUD LINE Y	CLOUD CODE
		(IN)	(Z)	(IN)	(Z)							
101	11.01	0.31	0.00	0.49	0.12	0.12	0.08	0.06	0.05	0.03	87	4
102	20.88	0.04	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	98	4
104	19.08	0.20	0.00	0.43	0.12	0.06	0.04	0.08	0.05	0.01	91	4
105	20.28	0.19	0.00	0.63	0.48	0.24	0.16	0.14	0.07	0.00	91	4
106	21.67	0.23	0.00	0.74	0.12	0.06	0.08	0.04	0.03	0.01	90	4
107	2.72	0.16	0.01	0.66	0.36	0.18	0.12	0.12	0.10	0.06	96	4
114	3.29	0.06	0.00	0.00	0.17	0.12	0.00	0.00	0.00	0.02	97	4
115	2.30	0.32	0.01	0.06	0.36	0.36	0.36	0.32	0.26	0.14	90	4
124	8.90	0.12	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.03	94	4
125	16.06	0.35	0.00	0.12	0.24	0.12	0.12	0.12	0.12	0.08	87	4
125	17.74	0.60	0.01	0.48	0.24	0.18	0.20	0.12	0.09	0.03	82	4
128	0.00	0.02	0.00	0.00	0.07	0.17	0.00	0.00	0.00	0.02	99	4
130	10.37	0.60	0.01	0.2	0.98	0.84	0.84	0.76	0.70	0.56	82	4
131	9.73	0.31	0.01	0.2	0.62	1.68	0.96	0.63	0.34	0.19	90	4
152	17.91	0.19	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.03	91	4
154	27.79	0.10	0.00	0.00	0.19	0.00	0.00	0.00	0.02	0.01	95	4
156	5.82	0.08	0.00	0.00	0.29	0.00	0.00	0.00	0.02	0.02	96	4
162	3.69	0.12	0.00	0.00	0.00	0.12	0.06	0.08	0.06	0.03	94	4
165	1.2.81	0.11	0.00	0.00	0.12	0.12	0.06	0.04	0.04	0.02	96	4
167	9.22	0.04	0.00	0.00	0.23	0.11	0.00	0.00	0.00	0.00	98	4
168	28.75	0.08	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.01	96	4
171	0.01	0.03	0.00	0.00	0.13	0.14	0.00	0.00	0.00	0.00	98	4
177	7.49	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	94	4
179	0.72	0.57	0.01	1.01	0.12	2.04	1.92	1.60	0.98	0.00	1.36	81
184	2.30	0.03	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.01	99	4
185	20.69	0.10	0.00	0.00	0.03	0.12	0.04	0.08	0.04	0.02	99	4
186	22.58	0.15	0.00	0.00	0.13	0.04	0.06	0.04	0.02	0.02	93	4
187	16.36	0.09	0.00	0.00	0.28	0.00	0.06	0.04	0.04	0.02	97	4
189	20.52	0.07	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	96	4
191	15.79	1.09	0.01	1.01	0.33	3.36	2.64	2.20	1.42	0.93	70	4
192	14.64	0.05	0.00	0.00	1.27	0.00	0.00	0.00	0.00	0.00	97	4
197	13.54	0.10	0.00	0.00	0.05	0.00	0.00	0.00	0.01	0.00	95	4
198	7.19	0.23	0.00	0.00	0.10	0.12	0.08	0.08	0.05	0.03	90	4
224	14.68	0.18	0.00	0.00	0.00	0.12	0.06	0.08	0.06	0.01	92	4
236	21.31	0.19	0.00	0.00	0.00	0.36	0.18	0.16	0.12	0.09	91	4
237	10.05	0.13	0.00	0.00	0.19	0.12	0.12	0.08	0.04	0.01	94	4
239	0.39	0.16	0.00	0.00	0.32	0.48	0.30	0.24	0.00	0.00	93	4
242	15.17	0.41	0.00	0.00	0.29	0.24	0.18	0.16	0.10	0.09	92	4

HAWAII SITE: WAIALLA SUGAR

YEAR: 1977

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES
(IN/HR)

JULIAN DAY	STORM LENGTH (HRS)	RAIN		--RUNOFF--		ANT. MOISTURE (IN)	CURVE NO.	EROSION INDEX	CROP CODE
		(IN)	(IN)	(IN)	(IN)				
244	5.37	0.06	0.00	0.56	0.00	0.00	0.00	0.01	1
245	13.34	0.16	0.00	0.47	0.00	0.06	0.06	0.01	1
247	11.43	0.06	0.00	0.63	0.00	0.00	0.00	0.01	1
250	2.35	0.09	0.00	0.23	0.12	0.12	0.08	0.04	1
253	12.69	0.06	0.00	0.00	0.12	0.06	0.04	0.00	1
266	5.07	0.04	0.00	0.00	0.00	0.00	0.00	0.00	1
266	14.69	0.64	0.00	0.04	0.36	0.36	0.24	0.15	1
267	5.35	0.24	0.00	0.67	0.24	0.18	0.12	0.09	1
268	1.29	0.22	0.00	0.91	0.60	0.42	0.40	0.20	1
276	1.82	0.06	0.00	0.00	0.00	0.04	0.02	0.02	1
277	17.63	0.07	0.00	0.06	0.00	0.06	0.04	0.02	1
288	2.57	0.04	0.00	0.00	0.00	0.00	0.04	0.02	1
297	5.41	0.04	0.00	0.00	0.00	0.00	0.00	0.01	1
298	10.83	1.42	0.03	2.04	1.68	1.38	1.08	0.86	1
299	7.28	0.14	0.00	1.45	0.24	0.12	0.08	0.08	1
300	6.71	0.35	0.00	2.159	0.36	0.30	0.20	0.16	1
301	10.66	0.15	0.00	0.94	0.12	0.24	0.16	0.10	1
305	7.38	0.26	0.00	1.050	0.72	0.42	0.28	0.14	1
306	7.52	0.08	0.00	0.41	0.12	0.06	0.08	0.02	1
306	21.05	1.72	0.09	5.034	1.32	0.84	0.68	0.40	1
308	8.18	0.09	0.00	2.06	0.12	0.06	0.08	0.05	1
309	5.03	0.12	0.00	2.16	0.36	0.24	0.16	0.08	1
310	9.55	0.11	0.00	0.228	0.12	0.06	0.04	0.02	1
311	0.41	0.07	0.00	4.213	0.36	0.30	0.20	0.09	1
315	18.02	0.07	0.00	0.18	0.00	0.00	0.00	0.01	1
316	19.20	0.15	0.00	6.014	0.48	0.42	0.28	0.14	1
322	0.93	0.10	0.00	0.00	0.24	0.13	0.12	0.09	1
337	16.06	1.63	0.06	3.000	0.84	0.80	0.74	0.10	1
365	16.99	1.06	0.11	1.01	1.08	0.72	0.60	0.48	1

HAWAII SITE: WAIALLA PINEAPPLE

YEAR: 1972

STORM DAY	JULIAN LENGTH (HRS)	RAIN --RUNOFF--		ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)		CROP CODE	CROP NO.	FROSTON INDEX
		(IN)	(Z)		5	10	15	30	60
48	9.58	0.50	0.00	0.00	0.00	0.00	0.00	0.05	0
53	11.08	2.10	0.84	40.	0.50	3.60	2.40	1.20	0.70
54	3.17	0.30	0.11	36.	2.10	1.20	0.60	0.40	0.20
55	7.92	0.20	0.01	6.	2.40	1.20	0.00	0.00	0.03
62	7.42	0.60	0.12	20.	0.00	1.20	0.60	0.40	0.20
62	14.25	1.20	0.26	22.	0.60	1.20	0.60	0.40	0.30
83	7.50	0.50	0.00	0.	0.00	0.00	0.00	0.00	0.
89	9.08	0.60	0.01	2.	0.00	0.00	0.60	0.40	0.20
97	15.58	0.40	0.00	0.	0.00	1.20	0.60	0.40	0.20
99	14.92	0.30	0.00	0.	0.40	0.00	0.00	0.00	0.
100	14.50	0.80	0.22	27.	0.70	1.20	0.60	0.40	0.20
105	16.67	3.60	1.36	38.	0.80	2.40	1.60	1.00	0.60
106	22.17	0.30	0.01	4.	3.60	0.00	0.00	0.00	0.00
108	7.25	1.30	0.71	55.	3.90	3.60	3.00	2.40	1.60
155	15.25	0.30	0.00	0.	0.00	0.00	0.00	0.00	0.
189	56.83	0.30	0.00	0.	0.00	0.00	0.00	0.00	0.
192	3.17	0.30	0.00	0.	0.30	0.00	0.00	0.00	0.
195	4.33	0.20	0.00	0.	0.60	0.00	0.00	0.00	0.
197	1.42	0.80	0.01	1.	0.50	1.20	1.20	0.80	0.60
231	5.92	0.30	0.00	0.	0.00	0.00	0.00	0.00	0.
232	25.58	0.20	0.00	0.	0.30	0.00	0.00	0.00	0.
233	5.75	0.20	0.00	0.	0.50	0.00	0.00	0.00	0.
233	19.92	0.30	0.00	0.	0.70	0.00	0.00	0.00	0.
239	1.42	0.20	0.00	0.	0.00	0.00	0.00	0.00	0.
242	10.17	0.30	0.00	0.	0.20	0.00	0.00	0.00	0.
243	12.25	0.30	0.00	0.	0.50	0.00	0.00	0.00	0.
245	0.67	0.20	0.00	0.	0.60	0.00	0.00	0.00	0.
247	15.75	0.50	0.00	0.	0.80	0.00	0.00	0.00	0.
277	5.33	2.00	W	W	0.00	2.40	2.40	2.00	1.40
302	22.67	3.10	0.78	25.	0.00	2.40	1.80	1.60	1.40
311	28.00	1.90	0.00	0.	0.00	0.00	0.00	0.10	0.06
313	12.33	0.30	0.00	0.	1.90	0.00	0.00	0.00	0.02
314	31.08	0.40	0.00	0.	2.20	0.00	0.00	0.00	0.01
330	11.83	1.40	0.21	15.	0.00	1.20	0.60	0.40	0.20
334	20.58	0.40	0.00	0.	1.40	0.00	0.00	0.10	0.02
337	4.92	0.60	0.00	0.	0.40	0.00	0.60	0.40	0.12
343	5.92	0.30	0.00	0.	0.00	0.00	0.00	0.00	0.05
349	52.92	0.20	0.00	0.	0.00	0.00	0.00	0.00	0.00

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1972

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			AVG INT	CURVE NO.	EROSION INDEX	CROP CODE
					5	10	15				
352	2.58	0.50	0.08	17.	0.20	1.20	0.80	0.40	0.30	0.24	4
352	16.50	0.60	0.06	10.	0.70	1.20	1.20	0.80	0.40	0.30	4
353	6.92	0.70	0.13	18.	1.30	1.20	0.60	0.40	0.40	0.30	4
353	7.00	0.80	0.03	4.	2.00	1.20	0.60	0.40	0.20	0.20	4
366	1.92	0.30	0.02	7.	0.00	0.60	0.40	0.20	0.10	0.24	4

HAWAII SITE: WAIALLA PINEAPPLE

YEAR: 1973

STORM JULIAN DAY	LENGTH (HRS)	RAIN -RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES	AVG INT	CUREVE NO.	EROSION INDEX	CROPP. CODE
		RAIN (IN)	RUNOFF (IN)							
6	4.25	0.40	0.02	5	0.00	0.00 0.20 0.10	0.09	90	0	4
26	38.42	0.40	0.00	0	0.00	0.00 0.00 0.00	0.01	83	0	4
32	5.50	0.20	0.00	0	0.40	0.00 0.00 0.00	0.04	91	0	4
34	9.50	0.90	0.06	6	0.20	1.20 0.80 0.40	0.30	80	2	4
39	8.50	0.50	0.06	13	0.90	1.20 0.80 0.40	0.20	91	1	4
51	7.58	0.60	0.00	0	0.00	0.00 0.00 0.00	0.10	77	0	4
62	21.75	0.40	W	W	0.00	0.00 0.00 0.00	0.00	83	0	4
64	4.42	0.50	W	W	0.40	1.20 0.60 0.40	0.20	80	0	4
87	5.00	0.30	W	W	0.00	0.00 0.00 0.00	0.00	87	0	4
88	39.58	0.50	W	W	0.30	0.00 0.00 0.00	0.00	80	0	4
97	48.58	0.30	W	W	0.00	0.00 0.00 0.00	0.00	87	0	4
116	41.17	0.50	0.00	0	0.00	0.00 0.00 0.00	0.00	80	0	4
120	75.08	0.30	0.00	0	0.50	0.00 0.00 0.00	0.00	87	0	4
125	18.75	0.30	0.00	1	0.30	0.00 0.00 0.00	0.00	89	0	4
126	38.25	0.30	0.00	1	0.60	0.00 0.00 0.00	0.00	89	0	4
137	26.50	0.90	0.04	4	0.00	0.00 0.00 0.00	0.00	78	0	4
139	42.25	1.30	0.22	17	0.90	1.20 0.60 0.40	0.20	80	1	4
141	9.17	0.30	0.04	13	2.20	0.00 0.60 0.40	0.20	94	0	4
164	21.33	0.60	0.00	0	0.00	0.00 0.00 0.00	0.00	77	0	4
166	3.08	0.20	0.00	0	0.60	0.00 0.00 0.00	0.00	91	0	4
180	11.17	0.20	0.00	0	0.00	0.00 0.00 0.00	0.00	91	0	4
181	35.83	0.90	0.00	0	0.20	0.00 0.00 0.00	0.10	72	0	4
183	44.08	0.80	0.07	10	1.10	1.20 0.60 0.40	0.20	84	0	4
189	29.33	0.50	0.00	0	0.00	0.00 0.00 0.00	0.00	80	0	4
195	10.42	0.20	0.00	0	0.00	0.00 0.00 0.00	0.02	91	0	4
214	46.58	0.40	0.00	0	0.00	0.00 0.00 0.00	0.00	83	0	4
219	17.75	0.20	0.00	0	0.40	0.00 0.00 0.00	0.00	91	0	4
221	2.42	0.70	0.05	8	0.20	1.20 0.80 0.60	0.50	85	3	4
227	9.50	0.20	0.00	0	0.00	0.00 0.00 0.00	0.00	71	0	4
323	22.00	0.50	0.01	1	0.00	1.20 0.60 0.40	0.20	84	0	4
325	5.33	0.30	0.00	3	0.50	0.00 0.00 0.00	0.10	91	0	4
327	27.42	0.80	0.00	12	0.00	2.40 1.20 0.80	0.40	70	5	4
335	17.58	2.00	0.23	12	0.00	0.00 0.00 0.00	0.50	91	0	4
343	11.83	0.20	0.00	0	0.00	0.00 0.00 0.00	0.02	83	0	4
344	16.25	0.40	0.00	0	0.20	0.00 0.00 0.00	0.20	83	0	4
357	5.92	0.50	0.03	5	0.00	1.20 0.60 0.40	0.10	87	0	4
363	14.42	1.00	0.29	28	0.00	2.40 1.20 0.80	0.30	89	4	4
365	39.33	2.40	1.08	45	1.00	1.20 0.80 0.60	0.50	85	10	4

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1974

STORM DAY	JULIAN LENGTH (HRS)	RAIN --RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN)	TIME INTERVAL (MIN) AND INTENSITIES (IN/HR)	AVG INT	CURVE NO	FROSTON INDEX CODE
		IN	%						
5	36.17	1.60	W	0.00	1.20	0.60	0.40	0.30	0.04
8	20.00	0.50	0.07	1.15	1.60	0.60	0.40	0.20	0.02
11	7.42	0.90	0.32	35.	0.50	1.20	1.20	0.80	0.50
13	25.00	0.90	0.00	0.0	1.40	0.00	0.00	0.00	0.04
14	7.17	0.40	0.27	67.	1.80	0.00	0.60	0.40	0.20
16	57.42	0.20	0.00	0.	2.20	0.00	0.00	0.00	0.06
24	17.92	0.60	0.11	12.	0.00	1.20	0.60	0.40	0.20
29	9.83	0.60	W	W	0.60	1.20	1.20	0.80	0.00
63	47.58	3.70	4.06	110.	0.00	2.40	1.20	1.00	0.50
71	9.42	0.80	0.66	82.	0.00	1.20	0.60	0.40	0.20
77	11.00	3.90	W	W	0.00	3.60	3.00	2.40	2.00
81	3.50	0.60	W	W	3.90	0.00	0.00	0.00	0.00
95	7.92	0.40	0.00	0.	0.00	0.00	0.00	0.00	0.05
96	18.92	1.00	0.00	0.	0.40	0.00	1.20	0.80	0.40
97	8.92	0.30	0.00	0.	1.40	0.00	0.00	0.00	0.00
101	0.42	0.70	0.00	0.	1.30	0.00	1.20	0.80	0.00
103	0.50	0.20	0.00	0.	0.70	0.00	0.00	0.00	0.00
107	15.08	0.30	0.00	0.	0.20	0.00	0.00	0.00	0.00
108	18.58	15.30	W	W	0.30	7.20	6.00	5.60	5.20
109	3.75	2.10	W	W	15.60	3.60	3.20	1.80	1.20
121	36.83	0.30	W	W	0.00	0.00	0.00	0.00	0.00
128	80.25	0.50	W	W	0.00	0.00	0.00	0.00	0.01
133	29.17	0.60	0.00	0.	0.50	0.00	0.60	0.40	0.20
135	7.58	1.40	0.49	35.	0.60	2.40	2.40	2.00	1.20
139	52.83	0.40	0.00	0.	2.00	0.00	0.00	0.00	0.00
146	1.67	0.60	0.04	7.	0.00	2.40	1.20	0.80	0.60
154	5.33	0.80	0.27	33.	0.00	2.40	1.80	1.60	1.00
195	8.08	0.20	0.00	0.	0.00	0.00	0.00	0.00	0.02
197	1.42	0.30	0.00	0.	0.20	0.00	0.60	0.00	0.00
198	10.83	4.30	0.80	12.	0.50	3.60	2.40	2.40	1.80
245	9.50	0.60	W	W	0.00	0.00	0.00	0.00	0.10
247	0.50	0.20	0.00	0.	0.60	0.00	0.00	0.00	0.40
248	1.17	1.50	0.12	8.	0.80	3.60	2.40	2.00	1.20
252	0.50	0.40	0.01	1.	1.70	2.40	1.20	1.20	0.60
262	1.75	0.30	0.04	14.	0.00	0.00	0.60	0.40	0.20
276	1.83	0.90	0.00	0.	0.00	1.20	1.20	0.80	0.40
291	9.58	0.70	0.00	0.	0.00	0.00	0.00	0.00	0.07
300	14.42	0.70	0.00	0.	0.00	0.00	0.00	0.00	0.05

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1974

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)		--RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES		
		(IN)	(%)	(IN)	(%)			5	10	15
314	3.67	0.20	W	W	W	0.00	0.00	0.00	0.00	0.00
315	1.08	0.20	W	W	W	0.20	0.00	0.00	0.00	0.00
319	19.25	0.90	W	W	W	0.40	0.00	0.60	0.40	0.20
320	3.92	0.30	W	W	W	1.10	0.00	0.00	0.00	0.00
323	3.83	0.40	W	W	W	1.20	0.00	0.00	0.40	0.00
324	34.79	3.10	4.92	15%	1.60	4.80	3.60	2.80	2.00	1.10
327	4.50	0.80	1.17	146%	3.50	3.60	3.00	2.00	1.40	0.70
346	72.92	0.40	W	W	W	0.00	0.00	0.00	0.00	0.00
349	6.59	0.30	0.04	12%	0.40	0.40	0.00	0.00	0.00	0.00
350	10.00	0.30	W	W	W	0.70	0.00	0.00	0.00	0.00
354	1.17	0.20	W	W	W	0.60	0.00	0.00	0.00	0.00
355	9.33	0.20	W	W	W	0.50	0.00	0.00	0.00	0.00
358	54.92	0.60	W	W	W	0.40	0.00	0.00	0.00	0.00
360	2.66	0.04	0.00	0.00	0.00	0.80	0.00	0.04	0.02	0.01
361	4.16	0.04	0.00	0.00	0.00	0.64	0.00	0.00	0.02	0.01
365	1.09	0.03	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)		--RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES		
		(IN)	(%)	(IN)	(%)			5	10	15
314	3.67	0.20	W	W	W	0.00	0.00	0.00	0.00	0.00
315	1.08	0.20	W	W	W	0.20	0.00	0.00	0.00	0.00
319	19.25	0.90	W	W	W	0.40	0.00	0.60	0.40	0.20
320	3.92	0.30	W	W	W	1.10	0.00	0.00	0.00	0.00
323	3.83	0.40	W	W	W	1.20	0.00	0.00	0.40	0.00
324	34.79	3.10	4.92	15%	1.60	4.80	3.60	2.80	2.00	1.10
327	4.50	0.80	1.17	146%	3.50	3.60	3.00	2.00	1.40	0.70
346	72.92	0.40	W	W	W	0.00	0.00	0.00	0.00	0.00
349	6.59	0.30	0.04	12%	0.40	0.40	0.00	0.00	0.00	0.00
350	10.00	0.30	W	W	W	0.70	0.00	0.00	0.00	0.00
354	1.17	0.20	W	W	W	0.60	0.00	0.00	0.00	0.00
355	9.33	0.20	W	W	W	0.50	0.00	0.00	0.00	0.00
358	54.92	0.60	W	W	W	0.40	0.00	0.00	0.00	0.00
360	2.66	0.04	0.00	0.00	0.00	0.80	0.00	0.04	0.02	0.01
361	4.16	0.04	0.00	0.00	0.00	0.64	0.00	0.00	0.02	0.01
365	1.09	0.03	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1975

JULIAN DAY	STORM LENGTH (HRS)	RAIN --RUNOFF--		ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)						CURVE NO	EROSION INDEX	CROP CODE	
		(IN)	(IN)		5	10	15	30	60	INT				
2	18.37	0.42	0.00	0.00	0.36	0.24	0.16	0.08	0.09	0.02	83	0	3	
3	5.51	0.35	0.00	0.00	0.42	0.24	0.18	0.20	0.18	0.06	85	0	3	
5	15.30	0.33	0.00	0.00	0.76	0.00	0.36	0.24	0.14	0.07	86	0	3	
6	1.56	0.08	0.00	0.00	1.09	0.14	0.00	0.00	0.00	0.05	96	0	3	
6	6.07	0.16	0.00	0.00	1.18	0.00	0.00	0.00	0.02	0.05	92	0	3	
6	5.08	0.35	0.00	0.00	1.34	0.36	0.18	0.20	0.18	0.12	85	0	3	
7	0.93	0.02	0.00	0.00	1.69	0.00	0.00	0.00	0.00	0.06	99	0	3	
7	14.25	0.25	0.00	0.00	1.30	0.48	0.36	0.24	0.12	0.06	89	0	3	
8	5.01	0.13	0.00	0.00	1.55	0.00	0.00	0.00	0.06	0.04	94	0	3	
8	6.81	0.24	0.00	0.00	1.34	0.48	0.48	0.40	0.24	0.13	89	0	3	
9	7.20	0.62	0.04	0.04	1.25	0.60	0.60	0.44	0.30	0.08	85	1	3	
11	3.02	0.38	0.04	0.12	1.27	0.60	0.60	0.56	0.36	0.21	92	0	3	
12	5.85	0.81	0.08	0.11	1.64	1.03	0.78	0.68	0.54	0.35	85	0	3	
13	6.07	0.35	0.00	0.00	2.18	0.72	0.60	0.52	0.32	0.19	85	0	3	
24	20.19	1.92	0.54	0.28	0.00	0.60	0.36	0.28	0.20	0.17	0.09	81	2	3
30	26.87	1.78	0.29	0.16	0.00	0.72	0.72	0.68	0.54	0.33	0.06	75	6	
31	21.99	5.08	0.09	1.00	1.78	2.16	1.92	1.48	1.00	0.87	0.28	100	41	
33	0.70	0.14	0.00	0.00	6.86	0.36	0.30	0.24	0.16	0.00	0.20	94	0	
33	4.81	0.66	0.95	1.44	7.00	2.16	1.74	1.24	0.78	0.55	0.40	102	4	
35	0.39	0.03	0.00	0.00	7.66	0.00	0.00	0.00	0.00	0.00	0.07	99	0	
35	3.50	0.05	0.00	0.00	5.91	0.12	0.06	0.08	0.04	0.03	0.01	97	0	
40	0.45	0.14	0.00	0.00	0.08	0.36	0.30	0.28	0.00	0.00	0.31	93	0	
47	1.58	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	99	0		
48	7.15	0.06	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	97	0	
50	0.16	0.04	0.00	0.00	0.08	0.17	0.00	0.00	0.00	0.00	0.22	98	0	
53	6.39	0.66	0.15	2.3	0.09	1.68	1.20	0.88	0.46	0.30	0.10	91	2	3
57	0.24	0.05	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.19	98	0		
58	3.99	0.05	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.01	98	0		
67	7.17	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	98	0		
67	1.83	0.05	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.02	0.03	98	0	
69	0.92	0.03	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.03	99	0		
69	0.74	0.03	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.04	0.03	99	0	
70	9.66	0.11	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.04	0.01	95	0	
70	2.34	0.08	0.00	0.00	0.25	0.24	0.12	0.08	0.06	0.04	0.04	96	0	
71	1.75	0.03	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.02	99	0	
73	4.80	0.22	0.00	0.00	0.34	0.48	0.42	0.28	0.22	0.12	0.05	90	0	
76	3.60	0.03	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	99	0	

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1975

STORM JULIAN DAY	LENGTH (HRS)	RAIN --RUNOFF--		ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)						AVG INT	CURVE NO.	EROSION INDEX	CROP CODE
		RAIN (IN)	RUNOFF (IN)		5	10	15	30	60	0.02				
77	5.02	0.09	0.00	0	0.24	0.11	0.09	0.04	0.02	0.02	0.02	95	0	0
77	2.75	0.03	0.00	0	0.34	0.00	0.00	0.00	0.00	0.00	0.00	99	0	0
78	0.69	0.06	0.00	0	0.37	0.00	0.06	0.08	0.06	0.09	0.08	97	0	0
79	2.32	0.04	0.00	0	0.21	0.00	0.00	0.00	0.02	0.02	0.02	92	0	0
81	3.00	0.06	0.00	0	0.25	0.00	0.00	0.03	0.04	0.02	0.02	97	0	0
81	2.99	0.05	0.00	0	0.29	0.00	0.00	0.00	0.04	0.02	0.02	98	0	0
82	4.72	0.05	0.00	0	0.34	0.00	0.00	0.00	0.04	0.02	0.01	97	0	0
83	1.92	0.04	0.00	0	0.28	0.00	0.00	0.00	0.00	0.00	0.02	98	0	0
84	3.15	0.11	0.00	0	0.26	0.12	0.06	0.08	0.06	0.05	0.03	95	0	0
87	16.42	2.16	0.87	40	0.21	1.20	1.08	1.04	0.84	0.57	0.13	84	13	0
87	9.99	0.16	0.00	0	2.32	0.12	0.06	0.08	0.06	0.05	0.02	93	0	0
90	5.57	0.25	0.00	0	2.32	0.24	0.18	0.16	0.12	0.11	0.04	89	0	0
92	2.86	0.08	0.00	0	2.57	0.05	0.12	0.08	0.06	0.04	0.03	96	0	1
93	4.41	0.06	0.00	0	0.33	0.00	0.00	0.00	0.00	0.02	0.01	97	0	1
93	4.43	0.03	0.00	0	0.39	0.00	0.00	0.00	0.00	0.09	0.00	98	0	1
94	3.65	0.06	0.00	0	0.43	0.00	0.00	0.00	0.00	0.02	0.02	97	0	1
95	6.45	0.21	0.00	0	0.50	0.12	0.06	0.08	0.08	0.05	0.03	90	0	0
95	5.90	0.14	0.00	0	0.46	0.12	0.12	0.08	0.04	0.05	0.02	93	0	0
105	1.66	0.04	0.00	0	0.00	0.00	0.00	0.00	0.00	0.01	0.02	98	0	1
106	5.59	0.07	0.00	0	0.04	0.00	0.00	0.00	0.00	0.02	0.01	96	0	1
106	3.57	0.06	0.00	0	0.11	0.00	0.00	0.00	0.00	0.02	0.02	97	0	1
107	7.73	0.09	0.00	0	0.18	0.00	0.00	0.00	0.00	0.02	0.01	95	0	1
107	1.24	0.04	0.00	0	0.28	0.00	0.00	0.00	0.04	0.02	0.03	98	0	1
113	1.26	0.04	0.00	0	0.00	0.00	0.00	0.00	0.03	0.01	0.03	98	0	1
113	1.02	0.04	0.00	0	0.04	0.00	0.04	0.00	0.00	0.00	0.00	98	0	1
116	0.68	0.03	0.00	0	0.07	0.00	0.07	0.00	0.00	0.00	0.00	95	0	1
118	0.18	0.02	0.00	0	0.11	0.00	0.06	0.00	0.00	0.00	0.00	98	0	1
118	1.84	0.03	0.00	0	0.05	0.00	0.05	0.00	0.00	0.00	0.01	99	0	1
119	1.57	0.02	0.00	0	0.08	0.00	0.08	0.00	0.00	0.00	0.01	99	0	1
123	0.33	0.03	0.00	0	0.06	0.00	0.06	0.00	0.00	0.00	0.07	99	0	1
124	2.42	0.02	0.00	0	0.05	0.00	0.05	0.00	0.00	0.00	0.00	99	0	1
124	2.25	0.02	0.00	0	0.05	0.00	0.05	0.00	0.00	0.00	0.00	98	0	1
133	2.83	0.04	0.00	0	0.00	0.00	0.00	0.00	0.00	0.02	0.01	98	0	1
133	1.82	0.11	0.00	0	0.04	0.00	0.24	0.12	0.08	0.03	0.06	95	0	1
134	5.66	0.05	0.00	0	0.15	0.00	0.00	0.00	0.00	0.00	0.00	99	0	1
135	2.42	0.07	0.00	0	0.20	0.00	0.06	0.04	0.02	0.01	0.04	98	0	1
141	8.78	0.02	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99	0	1
143	11.19	0.04	0.00	0	0.02	0.00	0.00	0.00	0.00	0.00	0.00	99	0	1

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1975

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES
(IN/HR)

STORM DAY	JULIAN LENGTH (HRS)	RAIN		--RUNOFF--		ANT. MOISTURE (IN)	CURVE NO.	EROSION INDEX	CHLP CODE
		(IN)	(IN)	(IN)	(IN)				
151	0.81	0.02	0.00	0.00	0.00	0.00	93	0	1
155	3.27	0.06	0.00	0.02	0.24	0.12	97	0	2
159	1.44	0.04	0.00	0.04	0.06	0.04	98	0	3
160	11.21	0.11	0.00	0.10	0.00	0.00	95	0	4
163	9.12	0.15	0.00	0.15	0.24	0.18	93	0	5
164	9.57	0.11	0.00	0.31	0.00	0.04	95	0	6
168	4.34	0.04	0.00	0.26	0.12	0.06	93	0	7
176	0.48	0.02	0.00	0.00	0.00	0.00	99	0	8
177	6.40	0.04	0.00	0.02	0.00	0.00	98	0	9
178	17.11	0.23	0.00	0.06	0.12	0.06	90	0	10
179	14.50	0.09	0.00	0.29	0.00	0.00	95	0	11
181	9.21	0.11	0.00	0.39	0.19	0.00	95	0	12
187	0.03	0.02	0.00	0.00	0.11	0.00	99	0	13
188	8.96	0.12	0.00	0.02	0.13	0.00	94	0	14
189	7.50	0.09	0.00	0.14	0.14	0.13	95	0	15
191	8.52	0.06	0.00	0.23	0.24	0.18	97	0	16
192	20.37	0.15	0.00	0.29	0.24	0.12	93	0	17
193	1.78	0.06	0.00	0.42	0.12	0.06	97	0	18
194	3.25	0.10	0.00	0.36	0.00	0.06	95	0	19
198	7.88	0.25	0.00	0.16	0.48	0.24	89	0	20
199	25.07	0.39	0.00	0.35	0.24	0.18	84	0	21
201	0.48	0.28	0.00	0.63	0.84	0.54	88	0	22
220	1.10	0.02	0.00	0.00	0.01	0.00	99	0	23
223	2.31	0.06	0.00	0.02	0.00	0.12	97	0	24
226	29.19	0.17	0.00	0.06	0.00	0.04	92	0	25
229	5.05	0.12	0.00	0.17	0.24	0.12	94	0	26
233	2.42	0.10	0.00	0.12	0.24	0.20	95	0	27
235	11.61	0.06	0.00	0.10	0.00	0.00	97	0	28
236	11.76	0.03	0.00	0.16	0.00	0.00	99	0	29
241	14.87	0.26	0.00	0.03	0.24	0.12	88	0	30
250	10.38	0.15	0.00	0.00	0.24	0.12	93	0	31
253	0.26	0.03	0.00	0.15	0.02	0.08	98	0	32
254	3.04	0.15	0.00	0.18	0.22	0.12	93	0	33
256	0.16	0.03	0.00	0.18	0.00	0.00	99	0	34
259	6.70	0.17	0.00	0.18	0.48	0.36	99	0	35
261	3.25	0.03	0.00	0.20	0.00	0.00	98	0	36
262	1.57	0.03	0.00	0.20	0.12	0.06	99	0	37
273	3.70	0.03	0.00	0.00	0.12	0.06	99	0	38

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1975

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			AVG INT	DURATN NO	EROSION INDEX	GROUP CODE
					5	10	15				
274	0.27	0.04	0.00	0.03	0.16	0.06	0.04	0.00	0.16	98	0
274	8.28	0.08	0.00	0.07	0.12	0.06	0.04	0.04	0.02	96	0
278	18.21	0.18	0.00	0.16	0.12	0.06	0.04	0.02	0.03	92	0
279	17.78	0.35	0.00	0.31	0.60	0.54	0.48	0.40	0.23	85	0
289	0.48	0.05	0.00	0.00	0.00	0.00	0.00	0.04	0.00	98	0
290	23.06	0.21	0.00	0.05	0.12	0.06	0.04	0.06	0.03	91	0
292	13.38	1.79	1.44	80.	0.25	1.56	1.38	1.24	1.08	89	0.13
298	12.10	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.02	96	0
307	12.71	0.07	0.00	0.00	0.12	0.00	0.00	0.00	0.01	97	0
308	3.06	0.02	0.00	0.07	0.00	0.00	0.00	0.00	0.01	99	0
309	6.82	0.08	0.00	0.08	0.00	0.06	0.04	0.04	0.02	0.01	96
311	7.65	0.24	0.00	0.17	0.36	0.30	0.20	0.12	0.07	0.03	89
312	16.41	0.27	0.00	0.40	0.24	0.18	0.16	0.10	0.08	0.02	68
313	4.79	0.03	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.01	79
314	16.56	0.19	0.00	0.62	0.12	0.06	0.04	0.04	0.04	0.01	91
320	2.47	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	98
324	0.13	0.08	0.00	0.03	0.36	0.00	0.00	0.00	0.00	0.63	96
327	3.72	0.53	0.31	59.	0.08	0.72	0.66	0.68	0.52	0.34	0.25
328	10.95	1.45	1.94	134.	0.61	1.56	1.38	1.16	0.66	0.46	0.15
328	36.90	5.97	5.34	89.	2.06	2.64	2.40	1.78	1.19	0.17	95
335	2.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.02	98	0
337	8.45	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.01	98	0
342	7.61	0.45	0.21	47.	0.05	0.48	0.36	0.32	0.20	0.16	0.06
343	1.68	0.14	0.06	41.	0.45	0.84	0.72	0.48	0.24	0.14	0.13
351	0.04	0.02	0.00	0.00	0.13	0.00	0.00	0.00	0.52	99	0
364	0.12	0.04	0.00	0.00	0.12	0.00	0.00	0.00	0.33	98	0

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1976

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES
(IN/HR)

JULIAN DAY	STORM LENGTH (HRS)	ANT. RAIN (IN)		-RUNOFF-- MOISTURE (%)		CURVE NO.	POSITION (IN/H)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)	CURVE NO.	POSITION (IN/H)
		5	10	15	30					
2	6. 98	0.07	0.00	0.00	0.06	0.08	0.06	0.03	0.01	0.01
6	28. 94	0.30	0.15	49.	0.07	0.36	0.30	0.10	0.08	0.01
9	5. 11	0.06	0.00	0.00	0.30	0.12	0.06	0.04	0.02	0.01
15	10. 56	0.24	0.13	55.	0.00	0.36	0.24	0.16	0.10	0.06
17	5. 71	0.06	0.00	0.	0.24	0.00	0.00	0.02	0.01	0.01
20	4. 62	0.08	0.00	0.	0.30	0.12	0.12	0.10	0.05	0.02
31	18. 29	1.53	0.30	20.	0.00	0.72	0.66	0.64	0.37	0.08
34	1. 77	0.08	0.00	0.	1.53	0.12	0.06	0.08	0.04	0.04
36	20. 94	2.22	1.33	60.	1.61	1.44	1.32	1.20	0.98	0.96
48	6. 84	0.03	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.00
57	0. 83	0.04	0.00	0.	0.00	0.00	0.00	0.00	0.02	0.00
64	15. 89	0.13	0.00	0.	0.00	0.43	0.06	0.04	0.04	0.03
67	25. 58	0.12	0.00	0.	0.13	0.00	0.00	0.04	0.00	0.00
68	10. 65	0.48	0.05	10.	0.25	0.24	0.24	0.20	0.14	0.11
69	5. 92	0.19	0.00	0.	0.73	0.12	0.12	0.08	0.07	0.03
77	9. 10	0.06	0.00	0.	0.00	0.00	0.06	0.04	0.04	0.02
77	12. 38	0.53	0.00	2.	0.06	0.60	0.54	0.49	0.28	0.14
78	6. 29	0.16	0.00	0.	0.59	0.24	0.12	0.12	0.08	0.07
80	10. 23	0.67	0.00	0.	0.76	0.00	0.00	0.00	0.02	0.00
81	11. 57	0.21	0.00	0.	0.83	0.12	0.12	0.08	0.08	0.05
82	15. 75	0.35	0.00	0.	1.04	0.12	0.12	0.12	0.06	0.02
84	15. 58	0.14	0.00	0.	0.63	0.02	0.06	0.04	0.04	0.02
85	13. 82	0.33	0.00	1.	0.77	0.24	0.18	0.16	0.12	0.08
87	0. 08	0.04	0.00	0.	0.82	0.24	0.00	0.00	0.00	0.02
89	14. 96	0.63	0.01	2.	0.51	0.48	0.30	0.20	0.18	0.15
90	37. 74	1.27	0.29	23.	1.00	0.84	0.42	0.28	0.16	0.15
92	1. 95	0.08	0.05	56.	1.94	0.24	0.12	0.08	0.08	0.04
94	4. 88	0.08	0.00	0.	1.98	0.24	0.12	0.08	0.04	0.02
95	7. 43	0.05	0.00	0.	1.44	0.24	0.12	0.08	0.04	0.02
96	9. 04	0.10	0.00	0.	0.22	0.24	0.12	0.06	0.03	0.01
97	0. 90	0.03	0.00	0.	0.33	0.00	0.00	0.02	0.00	0.04
98	26. 18	0.76	0.00	0.	0.28	0.36	0.24	0.16	0.11	0.03
107	10. 12	0.47	0.00	0.	0.00	0.24	0.24	0.20	0.18	0.05
108	6. 95	0.43	0.02	6.	0.47	0.72	0.36	0.32	0.22	0.17
109	0. 06	0.03	0.00	0.	0.90	0.13	0.00	0.00	0.00	0.02
110	8. 13	0.05	0.00	0.	0.93	0.00	0.00	0.00	0.01	0.01
111	13. 62	0.19	0.00	0.	0.98	0.24	0.12	0.08	0.04	0.01
112	14. 49	0.66	0.02	3.	1.17	0.48	0.30	0.24	0.20	0.13

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1976

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)	-RUNOFF-- (IN)	ANT. MOISTURE (%)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			AVG CURVE NO.	FROSTON CROP CODE
					5	10	15		
113	16.96	0.28	0.01	2	1.37	0.24	0.20	0.10	0.05
114	8.74	0.36	0.01	3	1.22	0.24	0.12	0.08	0.04
118	6.99	0.07	0.00	0	0.64	0.00	0.00	0.00	0
119	21.13	1.26	0.07	6	0.43	1.32	1.20	1.00	0.64
125	7.50	0.13	0.00	0	0.00	0.12	0.06	0.08	0.04
132	4.35	0.08	0.00	0	0.00	0.24	0.12	0.08	0.04
132	14.14	0.38	0.00	0	0.08	0.24	0.18	0.16	0.12
137	24.64	0.11	0.00	0	0.47	0.00	0.06	0.04	0.02
139	12.66	0.18	0.00	0	0.11	0.00	0.00	0.00	0.04
141	15.00	0.10	0.00	0	0.29	0.24	0.18	0.12	0.06
141	14.46	0.30	0.00	0	0.40	0.24	0.18	0.16	0.12
142	11.23	0.12	0.00	0	0.69	0.00	0.06	0.04	0.02
143	10.71	0.16	0.00	0	0.70	0.12	0.06	0.04	0.02
146	2.22	0.06	0.00	0	0.67	0.24	0.12	0.08	0.06
147	0.53	0.03	0.00	0	0.34	0.00	0.00	0.00	0.02
149	3.61	0.08	0.00	0	0.09	0.00	0.00	0.00	0.01
154	7.79	0.17	0.00	0	0.08	0.48	0.30	0.20	0.16
161	23.84	0.13	0.00	0	0.00	0.12	0.06	0.04	0.02
166	7.23	0.05	0.00	0	0.13	0.12	0.06	0.04	0.03
167	16.69	0.21	0.00	0	0.05	0.36	0.36	0.24	0.14
169	19.39	0.06	0.00	0	0.26	0.00	0.06	0.04	0.02
170	9.43	0.15	0.00	0	0.33	0.12	0.06	0.04	0.03
173	13.33	0.05	0.00	0	0.21	0.00	0.00	0.04	0.02
183	20.38	0.09	0.00	0	0.00	0.12	0.06	0.04	0.02
184	30.32	0.11	0.00	0	0.09	0.12	0.06	0.04	0.03
186	1.03	0.04	0.00	0	0.29	0.00	0.00	0.00	0.02
192	3.85	0.06	0.00	0	0.00	0.12	0.06	0.04	0.02
193	3.11	0.15	0.00	0	0.06	0.24	0.18	0.16	0.10
197	5.01	0.14	0.00	0	0.22	0.12	0.06	0.04	0.03
200	30.63	0.20	0.00	0	0.14	0.24	0.12	0.08	0.06
201	13.15	0.50	0.00	0	0.34	0.48	0.24	0.16	0.10
203	16.39	0.17	0.00	0	0.70	0.00	0.06	0.12	0.08
204	6.36	0.13	0.00	0	0.87	0.24	0.12	0.08	0.08
207	7.12	0.12	0.00	0	0.30	0.00	0.00	0.02	0.02
208	5.41	0.06	0.00	0	0.42	0.00	0.00	0.00	0.01
210	4.98	0.03	0.00	0	0.18	0.00	0.00	0.00	0.01
212	0.51	0.04	0.00	0	0.21	0.00	0.00	0.06	0.07
229	17.44	0.05	0.00	0	0.00	0.02	0.00	0.00	0.00

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1976

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			AVG INT IN/H	DRIVE NU IN/H	FROST LINE INDEX	CLOUD CODE
					5	10	15				
232	5.39	0.21	0.00	0.05	0.48	0.24	0.14	0.09	0.04	90	0
238	15.51	0.31	0.00	0.00	0.24	0.18	0.16	0.10	0.07	92	0
239	9.26	0.19	0.00	0.31	0.12	0.08	0.04	0.03	0.02	91	0
245	2.26	0.04	0.00	0.00	0.06	0.00	0.00	0.00	0.02	93	0
251	0.48	0.12	0.00	0.00	0.36	0.18	0.12	0.00	0.00	94	0
253	13.01	0.15	0.00	0.00	0.12	0.48	0.42	0.36	0.18	93	0
254	0.72	0.04	0.00	0.00	0.27	0.24	0.12	0.08	0.04	93	0
255	23.61	0.15	0.00	0.31	0.00	0.06	0.04	0.02	0.01	93	0
261	7.09	0.16	0.00	0.00	0.36	0.30	0.24	0.16	0.08	93	0
265	14.99	0.06	0.00	0.00	0.16	0.00	0.00	0.00	0.00	97	0
270	7.51	0.19	0.00	0.06	0.48	0.39	0.28	0.20	0.12	93	0
271	7.95	0.05	0.00	0.19	0.00	0.00	0.00	0.00	0.00	93	0
272	7.29	0.07	0.00	0.00	0.24	0.00	0.00	0.00	0.02	93	0
274	1.45	0.04	0.00	0.00	0.31	0.12	0.06	0.04	0.02	93	0
277	0.84	0.07	0.00	0.00	0.11	0.12	0.12	0.08	0.06	93	0
279	13.00	0.89	0.08	0.92	0.11	1.20	1.08	0.92	0.64	93	0
280	8.51	0.09	0.00	0.96	0.09	0.24	0.18	0.12	0.06	93	0
285	23.94	0.11	0.00	0.00	0.09	0.12	0.06	0.04	0.02	93	0
287	1.66	0.18	0.00	0.00	0.11	0.36	0.30	0.32	0.20	93	0
287	6.87	0.08	0.00	0.00	0.28	0.00	0.00	0.00	0.04	93	0
288	29.12	0.26	0.00	0.00	0.37	0.12	0.06	0.04	0.04	93	0
294	1.85	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.02	93	0
298	4.24	0.07	0.00	0.05	0.00	0.06	0.04	0.04	0.02	93	0
300	6.40	0.06	0.00	0.00	0.07	0.12	0.12	0.08	0.04	93	0
300	12.25	0.08	0.00	0.00	0.14	0.12	0.06	0.04	0.02	93	0
307	4.84	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93	0
310	16.93	0.11	0.00	0.00	0.05	0.00	0.06	0.04	0.02	93	0
311	22.07	0.10	0.00	0.00	0.16	0.12	0.06	0.04	0.02	93	0
312	11.17	0.07	0.00	0.00	0.26	0.00	0.00	0.00	0.00	93	0
319	3.34	0.05	0.00	0.00	0.00	0.00	0.12	0.08	0.04	93	0
320	10.18	0.53	0.00	0.00	0.05	0.36	0.18	0.16	0.12	93	0
323	17.48	0.36	0.00	0.00	0.58	0.24	0.12	0.08	0.06	93	0
329	2.66	0.06	0.00	0.00	0.36	0.24	0.12	0.08	0.00	93	0
330	3.94	0.39	0.03	0.7	0.06	0.84	0.60	0.52	0.32	93	0
341	19.81	0.14	0.00	0.00	0.00	0.12	0.08	0.06	0.04	93	0
350	3.88	0.08	0.00	0.00	0.12	0.05	0.04	0.02	0.02	93	0
364	8.86	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.01	93	0

HAWAII SITE: WAIALLA PINEAPPLE

YEAR: 1977 TIME INTERVAL (MIN) AND

MAXIMUM RAINFALL INTENSITIES

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--TRUNOFF-- (IN)	MOISTURE (IN)	ANT.			TIME INTERVAL (MIN) AND			CURVE EROSION CROSS INDEX			
					5	10	15	30	60	INT	NO	CODE		
2	7.23	0.09	0.00	0.00	0.36	0.18	0.12	0.08	0.04	0.01	95	0	3	
9	1.04	0.03	0.00	0.00	0.12	0.06	0.04	0.02	0.01	0.03	98	0	3	
11	3.56	0.04	0.00	0.00	0.12	0.06	0.04	0.02	0.01	0.01	98	0	3	
20	0.59	0.18	0.00	0.00	0.60	0.64	0.12	0.29	0.00	0.30	92	0	3	
27	3.82	0.38	0.04	1.1	0.00	0.72	0.66	0.60	0.42	0.30	92	1	3	
32	3.92	0.12	0.08	70.	0.38	0.24	0.18	0.20	0.14	0.10	14	0	3	
33	0.34	0.03	0.00	0.00	0.12	0.06	0.05	0.00	0.00	0.02	98	0	3	
45	24.04	0.81	0.00	0.00	0.24	0.24	0.24	0.18	0.13	0.02	71	0	3	
47	10.41	0.06	0.00	0.00	0.81	0.00	0.00	0.00	0.01	0.01	97	0	3	
54	19.04	0.82	0.00	0.00	0.24	0.18	0.16	0.10	0.10	0.04	71	0	3	
55	17.32	0.31	0.00	0.00	0.82	0.24	0.16	0.12	0.08	0.02	86	0	3	
57	12.80	0.06	0.00	0.00	1.13	0.00	0.00	0.00	0.00	0.00	97	0	3	
59	6.49	0.43	0.20	46.	1.19	0.96	0.90	0.68	0.49	0.23	97	1	3	
60	1.34	0.21	0.00	0.00	0.81	0.12	0.06	0.08	0.06	0.02	90	0	3	
62	5.18	0.07	0.00	0.00	0.70	0.12	0.06	0.04	0.04	0.01	93	0	3	
63	1.39	0.15	0.00	0.00	0.72	0.12	0.12	0.08	0.07	0.01	93	0	3	
64	19.86	0.34	0.11	33.	0.87	0.36	0.18	0.12	0.10	0.06	97	0	3	
65	12.35	0.14	0.12	84.	0.78	0.12	0.06	0.08	0.06	0.02	90	0	3	
70	17.25	0.15	0.00	0.00	0.14	0.01	0.06	0.04	0.10	0.06	93	0	3	
76	15.62	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.01	95	0	3	
77	22.24	0.29	0.00	0.00	0.11	0.24	0.18	0.12	0.10	0.07	91	0	3	
78	10.32	0.34	0.03	8	0.40	0.60	0.30	0.20	0.09	0.03	87	0	3	
78	23.22	0.74	0.29	40.	0.74	0.72	0.48	0.36	0.20	0.15	94	0	3	
80	15.27	0.34	0.12	35.	1.48	0.84	0.42	0.32	0.26	0.19	97	0	3	
81	3.18	0.07	0.06	89.	1.81	0.12	0.06	0.04	0.02	0.03	0.01	100	0	3
86	23.89	0.29	0.00	0.00	0.07	0.24	0.18	0.16	0.10	0.05	91	0	3	
88	13.36	0.88	0.35	39.	0.29	1.44	1.20	1.08	0.88	0.76	93	0	3	
89	5.36	0.17	0.44	256.	1.17	0.96	0.54	0.36	0.18	0.09	90	0	3	
93	8.81	0.04	0.00	0.00	1.05	0.00	0.00	0.00	0.00	0.00	98	0	3	
94	11.81	0.05	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.01	99	0	3	
97	24.65	0.23	0.00	0.00	0.09	0.19	0.04	0.04	0.04	0.03	97	0	3	
100	28.91	0.16	0.00	0.00	0.23	0.17	0.04	0.04	0.04	0.01	92	0	3	
103	3.64	0.07	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.02	97	0	3	
105	28.16	0.38	0.00	0.00	0.24	0.72	0.36	0.46	0.22	0.11	91	0	3	
107	1.58	0.08	0.00	0.00	0.45	0.24	0.18	0.16	0.09	0.07	97	0	3	
108	0.24	0.05	0.00	0.00	0.54	0.16	0.12	0.00	0.00	0.00	97	0	3	
109	17.13	2.76	2.16	78.	0.52	2.52	2.34	2.24	2.02	1.77	91	0	3	
110	4.89	1.05	0.69	6.6	3.28	1.56	0.56	0.26	0.62	0.44	97	0	3	

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1977

TIME INTERVAL (MIN) AND

MAXIMUM RAINFALL INTENSITIES (IN/HR)

JULIAN DAY	STORM LENGTH (HRS)	RAIN		--RUNOFF--		CURVE NO.	FROSTON INDEX	CROP CODE
		(IN)	(Z)	(IN)	(Z)			
114	15.19	0.07	0.00	0.381	0.00	0.00	0.01	4
115	5.61	0.33	0.11	34.	1.12	0.60	0.54	4
123	27.92	0.16	0.00	0.00	0.00	0.24	0.12	4
125	22.66	0.21	0.00	0.16	0.16	0.12	0.06	4
126	12.80	0.27	0.00	0.36	0.12	0.06	0.04	4
130	15.53	0.50	0.32	64.	0.47	0.96	0.84	4
130	16.13	0.38	0.45	117.	0.77	0.36	0.24	4
131	20.37	0.58	1.60	275.	1.15	1.20	1.08	4
132	13.70	1.12	1.49	133.	1.46	2.04	1.84	2
133	22.50	0.40	0.97	242.	2.58	0.48	0.42	4
134	10.28	0.23	0.67	290.	2.98	0.48	0.36	4
141	4.41	0.08	0.00	0.00	0.00	0.00	0.04	4
146	21.41	0.15	0.00	0.08	0.13	0.06	0.04	4
147	11.41	0.16	0.15	96.	0.15	0.24	0.12	4
152	13.39	0.15	0.00	0.16	0.00	0.06	0.04	4
154	7.31	0.15	0.02	15.	0.15	0.24	0.12	4
156	5.82	0.08	0.00	0.30	0.12	0.06	0.08	4
159	5.39	0.18	0.14	77.	0.23	0.60	0.54	4
168	0.09	0.05	0.00	0.00	0.00	0.24	0.00	4
169	5.54	0.05	0.00	0.05	0.00	0.06	0.04	4
177	7.12	0.03	0.00	0.00	0.00	0.00	0.00	4
179	11.77	0.94	0.90	96.	0.03	3.60	2.40	4
185	4.85	0.06	0.00	0.00	0.00	0.00	0.00	4
186	16.22	0.14	0.00	0.06	0.20	0.00	0.00	4
189	0.01	0.03	0.00	0.20	0.00	0.00	0.00	4
191	5.84	0.29	0.17	57.	0.17	0.36	0.36	4
197	20.56	0.19	0.00	0.00	0.12	0.06	0.04	4
211	0.66	0.03	0.00	0.00	0.00	0.00	0.00	4
215	2.00	0.06	0.00	0.03	0.12	0.06	0.04	4
218	5.05	0.05	0.00	0.06	0.00	0.00	0.00	4
224	14.69	0.06	0.00	0.00	0.12	0.06	0.04	4
237	9.47	0.08	0.00	0.00	0.00	0.06	0.04	4
242	5.55	0.11	0.00	0.00	0.08	0.12	0.06	4
244	5.92	0.03	0.00	0.00	0.11	0.00	0.00	4
246	15.29	0.06	0.00	0.00	0.14	0.24	0.12	4
266	14.07	0.19	0.00	0.00	0.00	0.12	0.18	4
268	3.66	0.05	0.00	0.19	0.18	0.00	0.00	4
283	4.19	0.03	0.00	0.00	0.04	0.00	0.00	4

HAWAII SITE: WAIALUA PINEAPPLE

YEAR: 1977

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)		--RUNOFF-- (IN)		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES (IN/HR)			CURVE NO.	EROSION INDEX	CROP CODE
		5	10	15	30			5	10	15			
297	0.90	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	4
298	11.77	1.12	1.25	1.12	0.04	0.72	0.60	0.60	0.40	0.34	0.11	10.1	3
299	4.09	0.06	0.00	0.00	1.16	0.00	0.00	0.05	0.00	0.00	0.02	9.7	0
300	20.05	0.26	0.81	3.12	1.22	0.24	0.24	0.20	0.14	0.10	0.02	10.2	0
305	11.99	0.10	0.00	0.00	0.26	0.12	0.06	0.08	0.04	0.02	0.00	9.5	0
306	13.13	0.74	0.68	9.2	0.10	0.36	0.24	0.20	0.16	0.14	0.04	9.9	0
307	0.40	0.03	0.00	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.07	9.9	0
308	14.51	0.07	0.00	0.00	0.88	0.00	0.06	0.04	0.04	0.03	0.01	9.6	0
309	4.51	0.13	0.00	0.00	0.96	0.24	0.18	0.12	0.06	0.04	0.03	9.4	0
310	15.65	0.10	0.00	0.00	1.09	0.00	0.00	0.00	0.02	0.01	0.00	9.5	0
314	3.44	0.03	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0
315	12.83	0.05	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	9.8	0
316	15.09	0.04	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	9.8	0

HAWAII SITE: MILITARI

YEAR: 1972

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			TYPE NO.	POSITION INDEX	TYPE NO.
					5	10	15			
117	55.83	0.30	0.00	0.00	0.00	0.00	0.00	0.01	87	0
195	31.91	0.40	0.00	0.00	0.00	0.00	0.00	0.01	83	0
329	1.33	0.40	W	W	0.00	0.00	0.40	0.40	83	0

HAWAII SITE: MILILANI

YEAR: 1973

STORM DAY	JULIAN LENGTH	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (%)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			AUG NO.	CLUE MILE	EFFECTIVE DURATION
					5	10	15			
34	1.75	0.40	0.00	0	0.00	0.00	0.20	0.00	0.23	0
39	10.92	0.30	0.00	0	0.40	0.00	0.00	0.00	0.93	4
61	5.50	0.20	0.00	0	0.00	0.00	0.00	0.00	0.04	4
62	2.75	0.30	0.00	0	0.20	0.00	0.00	0.00	0.11	4
64	12.67	0.50	0.00	0	0.50	0.00	0.00	0.00	0.04	4
66	6.67	0.40	0.00	0	1.00	0.00	0.00	0.00	0.06	4
69	29.25	1.30	W	W	0.90	0.00	0.00	0.40	0.20	4
75	7.58	0.40	W	W	0.00	0.00	0.00	0.00	0.05	4
77	6.17	0.20	W	W	0.40	0.00	0.00	0.00	0.03	4
81	88.50	0.50	W	W	0.20	0.00	0.00	0.00	0.01	4
87	24.25	0.50	W	W	0.50	0.00	0.00	0.00	0.10	4
89	33.25	0.20	W	W	0.50	0.00	0.00	0.00	0.02	4
106	7.00	0.30	0.00	0	0.00	0.00	0.00	0.00	0.06	4
110	18.00	0.50	0.00	0	0.30	0.00	0.00	0.00	0.04	1
116	34.08	0.40	0.00	0	0.00	0.00	0.00	0.00	0.03	1
138	86.58	1.10	0.00	0	0.00	0.00	0.00	0.00	0.01	1
144	1.67	0.30	0.00	0	1.10	0.00	0.00	0.00	0.20	1
147	0.58	0.80	0.00	0	0.30	3.60	2.40	1.60	0.80	1
158	2.33	0.20	0.00	0	0.00	0.00	0.00	0.00	0.00	1
164	24.00	1.10	0.00	0	0.00	0.00	0.00	0.40	0.20	1
181	22.08	0.60	0.00	0	0.00	0.00	0.00	0.00	0.10	1
183	13.75	0.20	0.00	0	0.60	0.00	0.00	0.00	0.03	1
184	16.92	0.40	0.00	0	0.80	0.00	0.00	0.00	0.08	1
216	5.50	0.50	0.00	0	0.00	0.00	0.00	0.00	0.05	1
217	3.08	0.20	0.00	0	0.50	0.00	0.00	0.00	0.10	1
247	12.33	0.20	0.00	0	0.00	0.00	0.00	0.00	0.00	1
249	25.50	0.30	0.00	0	0.20	0.00	0.00	0.00	0.02	1
272	5.92	0.40	0.00	0	0.00	0.00	0.00	0.00	0.09	1
280	1.58	0.20	0.00	0	0.00	0.00	0.00	0.00	0.06	1
286	9.67	0.50	0.01	1	0.00	0.00	0.60	0.40	0.30	2
287	8.75	0.50	0.00	0	0.50	0.00	0.00	0.00	0.05	2
289	0.25	0.20	0.00	0	1.00	0.00	0.00	0.40	0.00	2
291	3.92	0.40	0.00	0	1.20	0.00	0.00	0.00	0.10	2
292	1.42	0.20	0.00	0	1.10	0.00	0.00	0.00	0.06	2
294	25.67	0.30	0.00	0	0.80	0.00	0.00	0.00	0.01	2
302	6.17	0.90	0.02	2	0.00	1.20	1.20	0.80	0.60	2
315	1.67	0.80	0.08	1.1	0.00	1.20	1.20	1.20	0.80	2
324	3.25	0.60	0.02	4	0.00	1.20	0.60	0.80	0.40	2

HAWAII SITE: MILILANI

YEAR: 1973

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (%)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)
327	6.33	1.00	0.00	0.60	5 0.00 0.00 0.20 0.20
335	4.75	0.60	0.03	5 0.00	10 0.00 0.20 0.60 0.60
335	1.17	0.20	0.00	0.60	15 0.00 0.00 0.00 0.10
335	22.08	1.10	0.03	0.80	30 0.20 0.40 0.40 0.20
341	63.92	0.40	W	0.00	1.20 0.60 0.40 0.20 0.10
357	25.50	0.90	0.02	2.00	1.20 1.20 0.60 0.40 0.04
363	6.25	0.50	0.02	4.00	2.40 1.20 0.80 0.40 0.09
364	15.50	1.70	0.18	1.10	0.50 2.40 1.60 1.00 0.80 0.11
365	4.75	0.80	0.07	9.00	2.20 2.40 1.80 1.60 0.80 0.18
365	5.00	0.70	0.07	10.00	3.00 1.20 0.80 0.40 0.30 0.14

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (%)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)	EFJFVE. NO.	EFJFVN. INDEX	EFJFVN. CODE
327	6.33	1.00	0.00	0.60	5 0.00 0.00 0.20 0.20	67	1	3
335	4.75	0.60	0.03	5 0.00	10 0.00 0.20 0.60 0.60	65	2	2
335	1.17	0.20	0.00	0.60	15 0.00 0.00 0.00 0.10	61	0	2
335	22.08	1.10	0.03	0.80	30 0.20 0.40 0.40 0.20	60	0	2
341	63.92	0.40	W	0.00	1.20 0.60 0.40 0.20 0.10	53	0	2
357	25.50	0.90	0.02	2.00	1.20 1.20 0.60 0.40 0.04	55	0	2
363	6.25	0.50	0.02	4.00	2.40 1.20 0.80 0.40 0.09	56	1	2
364	15.50	1.70	0.18	1.10	0.50 2.40 1.60 1.00 0.80 0.11	52	12	2
365	4.75	0.80	0.07	9.00	2.20 2.40 1.80 1.60 0.80 0.18	53	2	2
365	5.00	0.70	0.07	10.00	3.00 1.20 0.80 0.40 0.30 0.14	56	1	2

HAWAII SITE: MILILANI

YEAR: 1974

STORM
JULIAN
DAYANT.
TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES
(IN/HR)

STORM LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	MOISTURE (%)	5	10	15	30	60	Avg INT	INT NO	CURVE INDEX	FREQUENCY TYPE	100E	
1 6.17	0.70	0.06	9	0.00	1.20	0.60	0.40	0.30	0.11	85	1	2		
2 5.75	0.40	0.00	2	0.70	0.00	0.40	0.20	0.10	0.08	88	0	2		
6 35.50	1.60	0.05	3	1.10	0.00	0.60	0.40	0.20	0.05	65	3	2		
8 2.25	0.30	0.00	0	1.60	0.00	0.00	0.20	0.10	0.13	87	0	2		
11 9.17	1.40	0.12	8	1.90	1.20	1.20	0.80	0.60	0.16	74	8	8		
12 8.33	0.50	0.00	2	1.70	1.20	0.60	0.40	0.20	0.10	84	0	2		
13 12.33	0.30	0.00	0	2.20	1.20	0.60	0.40	0.20	0.10	87	0	2		
14 15.08	0.80	W	W	2.20	1.20	0.60	0.40	0.20	0.05	71	0	2		
15 20.17	0.70	W	W	3.00	0.00	0.00	0.20	0.10	0.03	74	0	2		
23 18.42	0.50	0.00	0	0.00	0.00	0.00	0.00	0.00	0.03	80	0	2		
29 2.50	0.20	0.00	0	0.50	0.00	0.00	0.00	0.00	0.02	87	0	2		
30 3.58	0.30	0.00	0	0.20	0.00	0.00	0.00	0.00	0.10	87	0	2		
31 7.58	0.80	0.03	4	0.50	1.20	1.20	0.60	0.30	0.11	80	3	3		
32 4.00	2.40	0.27	11	1.30	3.60	2.40	2.00	1.60	1.20	69	5	2		
32 3.50	0.40	0.00	2	3.70	1.20	0.60	0.30	0.20	0.08	91	0	2		
32 6.50	0.50	0.00	2	4.10	1.20	0.60	0.40	0.20	0.10	87	0	2		
37 0.25	0.30	0.00	0	3.30	1.20	0.60	0.30	0.20	0.00	88	0	2		
41 3.33	0.40	0.01	1	0.30	1.20	1.20	0.80	0.40	0.20	0.12	87	0	2	
63 22.50	1.80	0.03	2	0.00	1.20	1.20	0.80	0.60	0.50	0.08	60	6		
77 4.42	1.40	0.05	3	0.00	1.20	1.20	1.20	1.00	0.60	0.32	69	11		
77 2.58	0.60	0.01	2	1.40	1.20	1.20	0.80	0.40	0.30	0.23	82	1		
78 0.83	0.50	0.02	4	2.00	2.40	1.80	1.60	0.80	0.00	2.00	86	3		
81 4.08	0.90	0.00	0	2.50	1.20	0.80	0.60	0.50	0.22	69	3			
107 1.92	0.20	0.00	0	0.00	0.00	0.00	0.00	0.00	0.10	91	0	1		
108 7.50	1.10	0.00	0	0.20	1.20	0.40	0.40	0.40	0.20	0.15	65	2		
109 9.58	2.80	0.03	1	1.30	2.40	1.80	1.60	1.20	0.90	0.29	47	2		
109 1.58	1.30	W	W	4.10	2.40	2.40	1.40	1.40	1.00	0.82	70	16		
1113 8.17	0.60	0.00	0	5.20	1.20	0.60	0.40	0.20	0.10	0.07	77	0	1	
1335 4.50	0.40	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.08	83	0	1	
148 1.83	2.30	0.04	2	0.00	4.80	3.60	3.20	2.20	1.90	1.26	54	49		
150 0.67	0.40	0.00	0	2.30	0.00	0.60	0.40	0.40	0.00	0.60	83	0	1	
179 19.83	0.50	0.00	0	0.00	0.00	0.60	0.40	0.20	0.10	0.03	80	0	2	
195 23.33	0.50	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.02	80	0	2	
198 7.58	1.20	0.00	1	0.50	1.20	1.20	0.60	0.60	0.18	67	6			
202 9.25	0.80	0.02	2	1.20	2.40	1.20	1.00	0.50	0.08	77	5	1		
223 17.58	0.20	0.00	0	0.00	0.00	0.00	0.00	0.00	0.01	91	0	1		
245 2.42	0.70	0.00	0	0.00	1.20	0.60	0.40	0.20	0.30	0.29	74	0	1	
248 1.08	0.70	0.00	1	0.70	1.20	0.60	1.00	0.60	0.60	0.60	1.21	79	5	

HAWAII SITE: MILILANI

YEAR: 1974

STORM JULIAN DAY	LENGTH (HRS)	RAIN --RUNOFF--		ANT. MOISTURE		MAXIMUM RAINFALL (MM) AND TIME INTERVAL (MIN) AND INTENSITIES (IN/Hr)			NO. OF CURVE NO.	EROSION INDEX	CUM. CODE	
		(IN)	(Z)	(IN)	(Z)	5	10	15	30	60		
252	1.42	0.60	0.02	3	0.70	1.20	1.20	0.80	0.60	0.40	0.48	8.3
260	26.50	0.20	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
262	2.75	4.30	2.64	61	0.20	6.00	5.40	5.20	5.20	3.70	1.56	84
263	1.33	0.80	0.04	4	4.50	1.20	1.20	0.80	0.80	0.70	0.80	90
264	2.17	1.80	0.84	47	5.30	3.60	2.40	2.40	2.40	1.50	1.20	89
266	0.17	0.30	0.00	0	7.10	1.20	1.20	0.00	0.00	0.00	1.76	87
271	10.92	1.50	0.01	0	0.00	2.40	1.80	1.20	0.60	0.60	0.14	61
300	8.50	1.30	0.00	0	0.00	1.20	0.60	0.80	0.60	0.50	0.15	61
301	2.25	0.20	0.00	0	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0
310	96.17	0.70	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
325	15.79	2.40	0.38	16	0.00	1.20	1.20	0.60	0.50	0.17	69	12
354	1.82	0.40	0.03	6	0.00	1.20	1.20	0.80	0.40	0.00	0.24	90
358	13.94	0.14	0.00	0	0.40	0.00	0.00	0.00	0.02	0.02	0.01	93
359	12.16	0.43	0.00	0	0.54	0.36	0.30	0.24	0.14	0.11	0.04	84
361	10.66	0.12	0.00	0	0.58	0.00	0.00	0.04	0.04	0.04	0.01	95
365	8.25	0.06	0.00	0	0.12	0.00	0.00	0.00	0.02	0.01	0.00	97

HAWAII SITE: MILILANI

YEAR: 1975

STORM LENGTH
JULIAN DAYTIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES
(IN/HR)

STORM DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			AVG. RUNOFF FREQUENCY INDEX	INT. NO.	INDEX CODE
					5	10	15			
2	11.07	0.42	0.00	0.00	0.24	0.30	0.24	0.12	0.09	0.04
3	10.34	0.06	0.00	0.42	0.00	0.00	0.04	0.02	0.01	0.01
4	17.97	0.08	0.00	0.48	0.12	0.06	0.08	0.04	0.02	0.02
5	4.24	0.09	0.00	0.57	0.24	0.18	0.12	0.06	0.04	0.02
6	8.94	0.08	0.00	0.66	0.00	0.00	0.00	0.04	0.02	0.00
6	4.50	0.25	0.00	0.74	0.84	0.84	0.64	0.32	0.17	0.06
7	9.53	0.09	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00
7	5.23	0.37	0.00	0.67	0.72	0.36	0.28	0.24	0.14	0.07
8	5.93	0.18	0.00	1.04	0.24	0.18	0.12	0.07	0.03	0.03
8	8.31	0.32	0.00	1.16	0.60	0.36	0.28	0.20	0.12	0.04
10	5.49	0.53	0.05	1.0	1.39	0.72	0.56	0.40	0.28	0.09
12	5.26	1.03	0.20	2.0	1.50	1.68	1.56	1.24	0.77	0.32
20	2.09	0.12	0.00	0.00	0.00	0.00	0.00	0.12	0.06	0.06
24	17.20	0.64	0.00	0.12	0.24	0.12	0.10	0.09	0.04	0.04
30	18.60	0.59	0.00	0.00	0.12	0.12	0.12	0.09	0.03	0.03
30	7.89	0.73	0.16	2.2	0.59	0.24	0.24	0.24	0.20	0.11
31	16.57	4.76	1.10	2.3	1.32	2.64	2.40	2.12	1.90	1.75
33	6.00	0.05	0.00	0.00	0.08	0.00	0.00	0.00	0.01	0.00
40	0.26	0.07	0.00	0.00	0.00	0.17	0.06	0.09	0.00	0.00
47	1.68	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
48	3.81	0.11	0.00	0.03	0.00	0.00	0.00	0.28	0.14	0.03
53	4.08	0.10	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.05
58	0.91	0.06	0.00	0.10	0.26	0.00	0.00	0.02	0.00	0.06
58	0.68	0.03	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.05
59	1.92	0.02	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.01
62	2.79	0.06	0.00	0.11	0.00	0.00	0.00	0.06	0.03	0.02
66	15.09	0.03	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
69	2.59	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.02
70	8.41	0.14	0.00	0.07	0.00	0.00	0.00	0.04	0.04	0.02
70	9.45	0.19	0.00	0.21	0.24	0.24	0.16	0.08	0.05	0.02
76	12.60	0.08	0.00	0.00	0.24	0.18	0.00	0.00	0.01	0.00
77	8.16	0.11	0.00	0.08	0.00	0.00	0.00	0.04	0.03	0.01
78	20.51	0.12	0.00	0.19	0.00	0.00	0.04	0.02	0.03	0.01
79	0.90	0.04	0.00	0.31	0.00	0.00	0.00	0.04	0.00	0.04
80	0.66	0.03	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.04
82	6.26	0.05	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
83	16.07	0.08	0.00	0.23	0.00	0.00	0.00	0.02	0.01	0.01
84	3.27	0.05	0.00	0.20	0.00	0.00	0.00	0.02	0.01	0.01

HAWAII SITE: MILILANI

YEAR: 1975

STORM DAY	JULIAN LENGTH (HRS)	ANT. RAIN			--RUNOFF--			MAXIMUM MOISTURE			TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES			CURVE NO.	Erosion INDEX	CROP CODE
		5	10	15	30	60	Avg INT	INT	INT	INT	INT	INT	INT			
87	0.51	0.08	0.00	0	0.18	0.00	0.06	0.04	0.13	0.00	0.16	0.00	0.16	96	0	2
87	16.28	1.65	0.00	0	0.21	0.60	0.54	0.52	0.48	0.47	0.10	0.10	0.10	55	0	2
89	0.44	0.05	0.00	0	1.78	0.00	0.12	0.08	0.00	0.00	0.11	0.00	0.11	98	0	2
90	8.83	0.28	0.00	0	1.78	0.48	0.42	0.36	0.20	0.14	0.03	0.03	0.03	88	0	2
92	1.07	0.04	0.00	0	2.06	0.00	0.00	0.04	0.02	0.01	0.03	0.03	0.03	98	0	2
93	3.66	0.28	0.00	0	0.36	0.48	0.42	0.28	0.16	0.14	0.07	0.07	0.07	68	0	2
94	20.72	0.09	0.00	0	0.64	0.00	0.00	0.04	0.04	0.02	0.00	0.00	0.00	96	0	2
95	2.08	0.05	0.00	0	0.69	0.00	0.00	0.00	0.02	0.01	0.02	0.02	0.02	98	0	2
96	7.57	0.26	0.00	0	0.45	0.24	0.18	0.16	0.10	0.06	0.03	0.03	0.03	88	0	2
96	8.70	0.06	0.00	0	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97	0	2
97	14.79	0.03	0.00	0	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98	0	2
98	5.98	0.26	0.00	0	0.78	0.36	0.32	0.26	0.19	0.04	0.04	0.04	0.04	89	0	2
104	3.58	0.07	0.00	0	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	96	0	2
106	18.31	0.11	0.00	0	0.07	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.01	95	0	2
107	18.97	0.14	0.00	0	0.19	0.00	0.12	0.08	0.04	0.03	0.00	0.00	0.00	94	0	2
109	5.65	0.04	0.00	0	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98	0	2
112	2.61	0.04	0.00	0	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98	0	2
113	17.07	0.13	0.00	0	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94	0	2
114	6.36	0.06	0.00	0	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97	0	2
118	16.00	0.05	0.00	0	0.20	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	98	0	2
121	22.57	0.04	0.00	0	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98	0	2
122	11.84	0.06	0.00	0	0.08	0.00	0.00	0.00	0.00	0.04	0.02	0.02	0.01	97	0	2
123	21.76	0.06	0.00	0	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97	0	2
124	30.75	0.25	0.00	0	0.16	0.12	0.07	0.04	0.04	0.03	0.00	0.00	0.00	89	0	2
126	2.74	0.05	0.00	0	0.41	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	98	0	2
127	8.65	0.13	0.00	0	0.42	0.00	0.00	0.04	0.02	0.04	0.02	0.02	0.02	94	0	2
133	0.60	0.04	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98	0	2
134	12.58	0.04	0.00	0	0.04	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	98	0	2
135	20.14	0.15	0.00	0	0.08	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.04	93	0	2
138	2.00	0.03	0.00	0	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99	0	2
140	18.65	0.06	0.00	0	0.18	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	97	0	2
160	20.92	0.12	0.00	0	0.00	0.00	0.12	0.06	0.04	0.04	0.03	0.01	0.01	94	0	2
161	7.20	0.05	0.00	0	0.12	0.00	0.00	0.00	0.00	0.04	0.02	0.02	0.00	98	0	2
162	6.76	0.08	0.00	0	0.17	0.00	0.00	0.00	0.00	0.02	0.02	0.01	0.01	96	0	2
164	18.20	0.12	0.00	0	0.26	0.12	0.06	0.04	0.04	0.03	0.00	0.00	0.00	94	0	2
165	8.74	0.18	0.00	0	0.37	0.24	0.18	0.12	0.08	0.05	0.02	0.02	0.02	92	0	2
166	6.02	0.08	0.00	0	0.43	0.24	0.12	0.08	0.06	0.03	0.01	0.01	0.00	96	0	2
169	5.02	0.03	0.00	0	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98	0	2

HAWAII SITE: MILILANI

YEAR: 1975

JULIAN DAY	STORM LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (%)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			CURVE NO.	EROSION CODE
					5	10	15		
178	20.99	0.04	0.00	0.00	0.00	0.00	0.02	0.01	0.00
179	5.24	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.00
180	1.11	0.04	0.00	0.07	0.00	0.00	0.00	0.00	0.04
181	22.16	0.18	0.00	0.12	0.12	0.06	0.04	0.04	0.00
188	8.99	0.06	0.00	0.00	0.00	0.06	0.04	0.02	0.01
189	12.22	0.05	0.00	0.06	0.12	0.06	0.04	0.02	0.01
191	33.56	0.15	0.00	0.11	0.12	0.06	0.04	0.02	0.01
194	3.42	0.08	0.00	0.20	0.00	0.00	0.00	0.02	0.02
198	10.99	0.30	0.00	0.08	0.12	0.06	0.04	0.06	0.03
199	21.94	0.26	0.00	0.39	0.24	0.18	0.20	0.12	0.08
200	3.14	0.02	0.00	0.56	0.00	0.00	0.00	0.00	0.00
204	11.67	0.25	0.00	0.28	0.24	0.18	0.12	0.08	0.07
220	15.17	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	4.24	0.05	0.00	0.02	0.00	0.00	0.04	0.02	0.01
226	18.19	0.20	0.00	0.05	0.24	0.19	0.12	0.08	0.07
227	5.20	0.03	0.00	0.25	0.00	0.00	0.00	0.00	0.00
229	4.19	0.05	0.00	0.23	0.00	0.00	0.00	0.02	0.01
233	2.81	0.12	0.00	0.05	0.36	0.18	0.16	0.08	0.04
242	10.98	0.28	0.00	0.00	0.24	0.12	0.12	0.10	0.08
251	10.26	0.13	0.00	0.00	0.12	0.06	0.04	0.02	0.01
254	6.63	0.07	0.00	0.13	0.00	0.00	0.00	0.00	0.01
259	5.84	0.07	0.00	0.07	0.00	0.06	0.04	0.04	0.03
262	6.18	0.04	0.00	0.07	0.12	0.06	0.04	0.02	0.01
266	3.33	0.02	0.00	0.04	0.00	0.00	0.00	0.00	0.00
278	14.78	0.14	0.00	0.00	0.12	0.06	0.08	0.04	0.04
279	18.97	0.27	0.00	0.14	0.36	0.30	0.20	0.18	0.11
284	0.20	0.06	0.00	0.27	0.36	0.24	0.00	0.00	0.00
288	8.87	0.13	0.00	0.06	0.00	0.06	0.04	0.04	0.02
290	22.98	0.28	0.00	0.13	0.12	0.18	0.12	0.06	0.05
292	7.21	0.43	0.00	0.42	1.44	0.76	0.72	0.40	0.23
298	10.65	0.12	0.00	0.00	0.12	0.06	0.08	0.05	0.01
309	0.02	0.02	0.00	0.00	0.13	0.00	0.00	0.00	1.05
309	1.66	0.06	0.00	0.02	0.00	0.00	0.04	0.02	0.00
311	8.33	0.21	0.00	0.07	0.48	0.24	0.16	0.10	0.06
311	30.40	0.44	0.00	0.29	0.48	0.24	0.16	0.08	0.06
314	13.28	0.10	0.00	0.73	0.00	0.00	0.00	0.04	0.02
320	1.86	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.02
323	1.40	0.04	0.00	0.03	0.12	0.06	0.04	0.02	0.01

HAWAII SITE: MILITANT

YEAR: 1975

STORM JULIAN DAY	LENGTH (HRS)	RAIN		--RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES			AVG CURVE NO.	FIGURE NO.	FIGURE NO.
		(IN)	(IN)	(IN)	(%)			5	10	15	30		
325	10.94	0.09	0.00	0.0	0.0	0.06	0.24	0.12	0.12	0.06	0.03	0.00	0.05
327	0.06	0.06	0.00	0.0	0.0	0.13	0.53	0.00	0.00	0.00	0.00	1.07	0.7
327	7.69	1.52	0.05	3	0.19	2.16	1.56	1.24	1.04	0.55	0.20	6.6	1.3
328	20.40	5.65	0.67	12	1.71	4.20	3.84	3.16	2.02	1.20	0.28	4.5	0.9
335	3.59	0.22	0.00	0	0.00	0.48	0.30	0.20	0.14	0.10	0.06	9.0	0.1
338	1.12	0.03	0.00	0	0.00	0.22	0.00	0.00	0.00	0.00	0.03	9.2	0.1
342	2.89	0.07	0.00	0	0.00	0.03	0.22	0.00	0.00	0.04	0.03	9.6	0.1
346	27.11	0.78	0.12	16	0.07	0.60	0.54	0.52	0.36	0.21	0.03	8.7	1
350	7.27	0.10	0.00	0	0.78	0.12	0.06	0.04	0.02	0.01	0.01	9.5	0

HAWAII SITE: MILITANT

YEAR: 1975

STORM LENGTH (HRS)	JULIAN DAY	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (%)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)		CROP CODE		
					5	10	15	30	60
2	9.27	0.25	0.00	0.00	0.24	0.12	0.16	0.10	0.04
5	2.12	0.11	0.00	0.25	0.12	0.12	0.08	0.06	0.03
6	2.78	0.06	0.00	0.36	0.12	0.06	0.04	0.02	0.04
10	3.32	0.05	0.00	0.17	0.00	0.00	0.02	0.01	0.02
15	9.46	0.04	0.00	0.05	0.00	0.00	0.00	0.00	0.00
17	4.32	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
20	4.95	0.11	0.00	0.07	0.24	0.18	0.16	0.10	0.06
30	35.62	0.73	0.00	0.00	0.72	0.42	0.28	0.16	0.15
36	18.36	0.99	0.00	0.00	1.08	0.84	0.64	0.46	0.26
37	13.75	2.66	0.17	6.	0.99	1.08	0.96	0.76	0.56
38	6.91	2.50	1.14	45.	3.65	3.36	3.24	2.52	1.90
39	9.69	2.24	0.32	14.	6.15	1.69	1.50	1.52	1.28
41	17.22	0.08	0.00	0.	3.42	0.00	0.00	0.00	0.00
43	4.48	0.09	0.00	0.	4.85	0.36	0.18	0.16	0.10
44	28.05	0.19	0.00	0.	0.21	0.24	0.12	0.08	0.04
46	25.56	0.20	0.00	0.	0.37	0.12	0.06	0.06	0.04
48	13.34	0.05	0.00	0.	0.49	0.00	0.00	0.00	0.00
50	3.45	0.04	0.00	0.	0.44	0.00	0.00	0.00	0.00
52	5.96	0.17	0.00	0.	0.08	0.24	0.12	0.08	0.05
53	2.08	0.07	0.00	0.	0.25	0.12	0.06	0.07	0.02
58	0.46	0.14	0.00	0.	0.07	0.48	0.42	0.36	0.24
59	1.84	0.33	0.00	0.	0.14	0.36	0.30	0.32	0.24
61	7.95	0.59	0.03	5.	0.47	1.68	1.32	1.04	0.66
65	3.74	0.02	0.00	0.	0.59	0.00	0.00	0.00	0.00
67	31.76	0.23	0.00	0.	0.02	0.12	0.06	0.04	0.03
77	22.29	0.63	0.00	0.	0.00	0.48	0.30	0.24	0.18
80	11.45	0.11	0.00	0.	0.63	0.17	0.09	0.02	0.01
83	6.17	0.19	0.00	0.	0.11	0.24	0.12	0.12	0.08
84	40.37	0.46	0.00	0.	0.31	0.24	0.18	0.12	0.10
89	19.65	0.90	0.01	1.4	0.46	0.84	0.54	0.48	0.32
90	20.32	0.89	0.04	4.	0.90	0.72	0.66	0.64	0.32
91	14.29	0.59	0.18	30.	1.79	0.84	0.54	0.40	0.36
92	23.85	0.25	0.00	0.	2.38	0.24	0.12	0.08	0.05
93	8.62	0.21	0.00	0.	2.62	0.48	0.24	0.16	0.12
95	22.11	0.06	0.00	0.	1.93	0.12	0.06	0.04	0.03
97	14.44	0.20	0.00	0.	0.52	0.24	0.14	0.16	0.08
98	20.57	0.00	0.00	0.	0.48	0.24	0.12	0.06	0.03

HAWAII SITE: MILILANI

YEAR: 1976

STORM DAY	JULIAN LENGTH (HRS)	RAIN - RUNOFF		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES		
		(IN)	(IN)			10	15	30
99	14.13	0.04	0.00	0.70	0.00	0.00	0.00	0.00
107	19.61	0.25	0.00	0.00	0.36	0.24	0.20	0.11
108	11.64	0.11	0.00	0.25	0.12	0.12	0.06	0.04
110	9.72	0.13	0.00	0.36	0.00	0.12	0.03	0.02
111	8.49	0.08	0.00	0.49	0.12	0.06	0.04	0.02
112	14.26	0.47	0.00	0.58	0.24	0.18	0.16	0.12
113	12.67	0.19	0.00	0.79	0.12	0.06	0.08	0.05
114	5.82	0.36	0.10	29	0.24	0.18	0.16	0.12
117	0.71	0.09	0.00	1.01	0.24	0.18	0.12	0.10
118	17.58	0.09	0.00	0.64	0.00	0.00	0.04	0.04
120	3.21	0.23	0.01	2	0.19	0.48	0.42	0.32
131	0.00	0.02	0.00	0.00	0.04	0.00	0.00	0.00
132	6.67	0.14	0.00	0.02	0.12	0.06	0.08	0.06
133	8.07	0.24	0.00	0.16	0.12	0.12	0.08	0.06
137	12.46	0.22	0.00	0.39	0.36	0.24	0.20	0.10
139	4.62	0.21	0.00	0.22	0.12	0.18	0.16	0.10
141	21.99	0.07	0.00	0.43	0.09	0.00	0.00	0.00
142	19.58	0.15	0.00	0.51	0.09	0.00	0.02	0.01
145	2.44	0.03	0.00	0.23	0.05	0.00	0.00	0.02
149	20.57	0.30	0.00	0.03	0.24	0.18	0.12	0.10
153	0.67	0.09	0.00	0.30	0.24	0.18	0.20	0.10
156	0.03	0.03	0.00	0.09	0.19	0.00	0.00	0.00
158	0.00	0.03	0.00	0.12	0.00	0.00	0.00	0.01
160	6.26	0.07	0.00	0.06	0.12	0.06	0.08	0.04
161	3.09	0.03	0.00	0.13	0.00	0.00	0.00	0.00
161	12.12	0.18	0.00	0.14	0.24	0.18	0.12	0.06
162	4.37	0.05	0.00	0.32	0.00	0.00	0.00	0.00
167	6.05	0.04	0.00	0.05	0.00	0.00	0.00	0.03
167	8.68	0.14	0.00	0.08	0.12	0.06	0.04	0.02
169	7.58	0.04	0.00	0.18	0.00	0.00	0.00	0.00
171	6.35	0.16	0.00	0.22	0.00	0.06	0.08	0.04
173	3.41	0.04	0.00	0.20	0.00	0.00	0.04	0.02
178	0.18	0.03	0.00	0.04	0.00	0.06	0.00	0.00
183	4.86	0.07	0.00	0.03	0.00	0.06	0.04	0.02
184	3.69	0.06	0.00	0.07	0.00	0.00	0.02	0.01
191	8.18	0.06	0.00	0.00	0.00	0.00	0.02	0.01
193	5.55	0.19	0.00	0.06	0.24	0.12	0.10	0.09
197	0.79	0.05	0.00	0.19	0.12	0.06	0.08	0.04

HAWAII SITE: MILITANT

YEAR: 1976

TIME INTERVAL (MIN) AND
MAXIMUM RAINFALL INTENSITIES

STORM DAY	JULIAN LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	MOISTURE (IN)	INT.	NO.	INDEX	CURVE EROSION CYCLE CODE	
					5	10	15	30	60
199	6.19	0.04	0.00	0.05	0.00	0.00	0.00	0.00	0.00
201	25.53	0.37	0.00	0.09	0.36	0.24	0.20	0.14	0.09
203	24.31	0.27	0.00	0.42	0.12	0.06	0.04	0.04	0.04
205	1.19	0.03	0.00	0.65	0.00	0.00	0.00	0.00	0.01
207	0.63	0.03	0.00	0.30	0.12	0.06	0.04	0.02	0.00
208	5.38	0.28	0.00	0.33	0.24	0.12	0.12	0.10	0.09
219	11.11	0.15	0.00	0.00	0.12	0.06	0.06	0.06	0.01
224	12.77	0.11	0.00	0.15	0.12	0.12	0.12	0.08	0.04
226	8.94	0.06	0.00	0.11	0.09	0.09	0.09	0.00	0.00
230	0.05	0.03	0.00	0.06	0.14	0.00	0.00	0.00	0.00
231	7.59	0.24	0.00	0.09	0.48	0.24	0.20	0.14	0.10
238	9.40	0.26	0.00	0.00	0.24	0.12	0.12	0.06	0.06
239	8.49	0.07	0.00	0.26	0.00	0.00	0.00	0.01	0.01
253	4.18	0.10	0.00	0.00	0.24	0.12	0.12	0.10	0.05
255	4.26	0.08	0.00	0.10	0.16	0.00	0.00	0.04	0.03
256	1.19	0.03	0.00	0.19	0.00	0.00	0.00	0.00	0.03
263	0.26	0.06	0.00	0.00	0.06	0.06	0.30	0.23	0.00
265	17.94	0.44	0.00	0.06	0.24	0.24	0.20	0.14	0.14
270	3.78	0.06	0.00	0.44	0.00	0.00	0.00	0.00	0.02
271	33.54	0.21	0.00	0.06	0.24	0.18	0.12	0.12	0.11
279	0.50	0.24	0.00	0.00	0.72	0.60	0.56	0.46	0.00
286	19.96	0.08	0.00	0.00	0.00	0.00	0.04	0.02	0.02
287	2.54	0.04	0.00	0.08	0.07	0.00	0.00	0.00	0.01
288	7.28	0.05	0.00	0.12	0.00	0.00	0.00	0.00	0.00
298	2.06	0.05	0.00	0.00	0.00	0.00	0.00	0.02	0.00
299	28.70	0.08	0.00	0.05	0.12	0.00	0.00	0.00	0.00
310	15.55	0.06	0.00	0.00	0.00	0.00	0.00	0.01	0.00
311	10.43	0.09	0.00	0.06	0.00	0.06	0.04	0.02	0.02
319	3.17	0.04	0.00	0.00	0.00	0.00	0.00	0.02	0.01
320	15.85	0.72	0.00	0.04	0.36	0.30	0.32	0.30	0.05
324	1.76	0.04	0.00	0.76	0.12	0.06	0.04	0.02	0.01
329	27.04	0.26	0.00	0.04	0.24	0.12	0.12	0.06	0.04
341	15.99	0.09	0.00	0.00	0.04	0.00	0.00	0.02	0.01
350	0.35	0.04	0.00	0.00	0.09	0.04	0.00	0.00	0.10
354	0.15	0.03	0.00	0.04	0.12	0.00	0.00	0.00	0.29
362	2.94	0.05	0.00	0.00	0.00	0.00	0.02	0.01	0.02

HAWAII SITE: MILILANI

YEAR: 1977

JULIAN DAY	STORM LENGTH (HRS)	RAIN		--RUNOFF--		ANT.		MOISTURE		TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HRS)		AVG		CLOUDS		EFFECTIVE CLOUDS		
		(IN)	(IN)	(IN)	(%)	CIN)	5	10	15	30	60	0.04	0.03	0.03	0.04	0.04	0.04	0.04
2	4.84	0.14	0.00	0.00	0.00	0.00	0.12	0.12	0.08	0.08	0.04	0.03	0.03	0.04	0.04	0.04	0.04	
8	2.36	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.04	0.04	0.04	0.04
14	3.20	0.05	0.00	0.00	0.00	0.00	0.12	0.06	0.04	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
27	11.10	0.21	0.00	0.00	0.00	0.00	0.24	0.24	0.24	0.20	0.17	0.04	0.04	0.04	0.04	0.04	0.04	0.04
31	5.09	0.06	0.00	0.00	0.00	0.21	0.24	0.18	0.12	0.08	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
31	8.49	0.08	0.00	0.00	0.00	0.27	0.24	0.18	0.16	0.10	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
54	7.33	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	12.70	0.06	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
56	12.84	0.06	0.00	0.00	0.00	0.12	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
57	22.37	0.31	0.00	0.00	0.00	0.18	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
59	20.27	0.13	0.00	0.00	0.00	0.50	0.12	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
61	10.68	0.33	0.00	0.00	0.00	0.51	0.36	0.24	0.24	0.24	0.14	0.09	0.09	0.09	0.09	0.09	0.09	0.09
62	6.16	0.20	0.00	0.00	0.00	0.78	0.24	0.18	0.12	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
63	26.56	0.49	0.00	0.00	0.00	0.66	0.24	0.12	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
65	5.60	0.42	0.02	0.02	0.02	4.1.02	0.24	0.18	0.16	0.16	0.16	0.13	0.13	0.13	0.13	0.13	0.13	0.13
67	16.06	0.11	0.00	0.00	0.00	1.11	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	2.34	0.02	0.00	0.00	0.00	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	21.76	0.17	0.00	0.00	0.00	0.55	0.24	0.12	0.12	0.16	0.12	0.06	0.06	0.06	0.06	0.06	0.06	0.06
71	22.96	0.23	0.00	0.00	0.00	0.30	0.24	0.24	0.16	0.16	0.06	0.03	0.03	0.03	0.03	0.03	0.03	0.03
72	12.30	0.15	0.00	0.00	0.00	0.53	0.00	0.06	0.04	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
73	9.47	0.15	0.00	0.00	0.00	0.58	0.24	0.12	0.08	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
75	17.38	0.12	0.00	0.00	0.00	0.71	0.24	0.12	0.08	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03
77	26.04	0.33	0.00	0.00	0.00	0.42	0.12	0.12	0.12	0.12	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05
78	27.88	0.52	0.02	0.02	0.02	0.60	0.48	0.42	0.32	0.20	0.12	0.02	0.02	0.02	0.02	0.02	0.02	0.02
80	17.39	0.19	0.00	0.00	0.00	0.97	0.12	0.06	0.08	0.05	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02
81	11.03	0.06	0.00	0.00	0.00	1.03	0.00	0.03	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
86	22.84	0.55	0.00	0.00	0.00	0.06	0.55	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
88	10.09	0.47	0.02	0.02	0.02	5.1.02	0.60	0.60	0.40	0.40	0.20	0.16	0.16	0.16	0.16	0.16	0.16	0.16
89	19.36	0.50	0.02	0.02	0.02	8.1.52	1.20	0.90	0.60	0.60	0.30	0.15	0.15	0.15	0.15	0.15	0.15	0.15
90	14.52	0.59	0.05	0.05	0.05	2.11	0.60	0.36	0.24	0.14	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
91	7.54	0.22	0.01	0.01	0.01	5.1.02	0.72	0.48	0.36	0.24	0.14	0.08	0.08	0.08	0.08	0.08	0.08	0.08
97	8.81	0.28	0.00	0.00	0.00	0.00	1.32	1.02	0.68	0.34	0.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05
100	10.32	0.12	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
103	2.87	0.06	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
105	24.39	0.36	0.00	0.00	0.00	0.19	0.24	0.18	0.12	0.12	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
107	17.45	0.25	0.00	0.00	0.00	0.42	0.00	0.00	0.12	0.12	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
109	9.33	0.34	0.04	0.04	0.04	12.0.61	0.96	0.96	0.48	0.48	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
114	2.93	0.96	0.06	0.06	0.06	6.0.34	2.40	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76

HAWAII SITE: MILLANI

YEAR: 1977

JULIAN DAY	STORM LENGTH (HRS)	RAIN		--RUNOFF--		ANT. MOISTURE (IN)	MAXIMUM RAINFALL (IN/HRS)	TIME INTERVAL (MIN) AND INTENSITIES (IN/HRS)	CURVE NO.	EROSION INDEX	CROP DAMAGE
		IN	IN	IN	IN						
115	10.54	1.61	0.15	1.0	0.96	1.56	1.44	1.32	1	22	0.93
119	0.42	0.05	0.00	0	2.57	0.12	0.06	0.04	0	11	0.00
123	9.23	0.06	0.00	0	0.05	0.00	0.00	0.00	0	0.00	0.00
124	4.37	0.06	0.00	0	0.11	0.00	0.00	0.03	0	0.04	0.00
125	26.98	0.66	0.00	0	0.12	0.36	0.24	0.16	0	12	0.02
129	1.56	0.17	0.00	0	0.72	0.36	0.24	0.20	0	10	0.05
130	18.99	0.92	0.04	4	0.83	0.60	0.60	0.56	0	40	0.30
131	8.72	0.56	0.04	8	1.09	0.84	0.48	0.44	0	28	0.19
132	18.18	1.06	0.06	7	1.65	1.20	1.08	0.92	0	72	0.57
133	12.52	0.28	0.01	2	2.71	0.60	0.30	0.24	0	12	0.06
134	12.84	0.32	0.00	2	2.99	0.36	0.30	0.32	0	24	0.14
141	24.01	0.11	0.00	0	0.00	0.00	0.00	0.08	0	04	0.00
146	7.83	0.17	0.00	0	0.11	0.00	0.06	0.04	0	03	0.00
147	8.21	0.23	0.00	0	0.17	0.24	0.18	0.16	0	10	0.08
151	4.57	0.07	0.00	0	0.40	0.00	0.00	0.00	0	02	0.02
152	9.13	0.25	0.00	0	0.31	0.12	0.12	0.12	0	08	0.02
156	0.84	0.11	0.00	0	0.32	0.36	0.18	0.12	0	06	0.00
158	0.31	0.05	0.00	0	0.11	0.12	0.12	0.08	0	00	0.00
165	0.48	0.02	0.00	0	0.00	0.00	0.00	0.00	0	00	0.00
168	24.36	0.30	0.00	0	0.02	0.12	0.12	0.08	0	06	0.00
169	20.07	0.07	0.00	0	0.33	0.00	0.00	0.04	0	02	0.02
178	7.40	0.24	0.00	0	0.00	0.72	0.60	0.49	0	20	0.10
179	0.69	0.05	0.00	0	0.24	0.12	0.12	0.12	0	06	0.00
185	20.82	0.13	0.00	0	0.00	0.12	0.06	0.04	0	04	0.00
186	11.02	0.08	0.00	0	0.13	0.02	0.00	0.00	0	02	0.00
187	3.76	0.08	0.00	0	0.21	0.12	0.06	0.04	0	02	0.02
189	21.89	0.10	0.00	0	0.29	0.00	0.06	0.04	0	02	0.03
191	5.87	0.07	0.00	0	0.27	0.00	0.00	0.04	0	02	0.01
197	9.90	0.06	0.00	0	0.00	0.00	0.00	0.00	0	00	0.00
209	1.76	0.04	0.00	0	0.00	0.07	0.00	0.00	0	01	0.02
216	8.30	0.05	0.00	0	0.00	0.09	0.00	0.00	0	00	0.01
224	10.25	0.05	0.00	0	0.00	0.00	0.00	0.02	0	01	0.00
236	0.55	0.05	0.00	0	0.00	0.00	0.00	0.08	0	00	0.09
237	9.02	0.09	0.00	0	0.05	0.05	0.00	0.00	0	02	0.01
242	15.18	0.09	0.00	0	0.09	0.00	0.06	0.04	0	04	0.03
244	10.27	0.12	0.00	0	0.09	0.12	0.06	0.08	0	06	0.04
259	3.99	0.03	0.00	0	0.00	0.00	0.00	0.00	0	00	0.00
266	16.54	0.06	0.00	0	0.00	0.12	0.06	0.04	0	02	0.01

HAWAII SITE: MILILANI

YEAR: 1977

STORM JULIAN DAY	LENGTH (HRS)	RAIN --RUNOFF--		MAXIMUM MOISTURE (IN)	ANT. TIME INTERVAL (MIN)	AVG RAINFALL (IN/HR)	INT INTENSITIES	CURVE NO.	FUSION INDEX (0.0- 4)
		RAIN (IN)	RUNOFF (%)						
267	20.70	0.15	0.00	0.06	5	0.10	60	9.3	4
273	0.22	0.12	0.00	0.00	0.36	0.18	0.16	0.05	4
288	2.71	0.04	0.00	0.00	0.48	0.42	0.00	0.56	4
298	14.42	0.17	0.00	0.00	0.00	0.24	0.18	0.08	4
299	4.15	0.03	0.00	0.17	0.00	0.00	0.00	0.00	4
300	14.57	0.17	0.00	0.20	0.12	0.12	0.08	0.06	4
305	6.66	0.15	0.00	0.17	0.12	0.06	0.04	0.04	4
306	17.08	0.27	0.00	0.15	0.12	0.06	0.04	0.03	4
308	3.05	0.21	0.00	0.42	0.12	0.18	0.12	0.10	4
309	21.83	0.12	0.00	0.63	0.12	0.06	0.04	0.03	4
321	5.02	0.18	0.00	0.00	0.48	0.42	0.36	0.26	4
326	3.24	0.04	0.00	0.18	0.00	0.00	0.00	0.01	4
334	4.89	0.14	0.00	0.00	0.66	0.06	0.04	0.02	4
337	1.38	0.04	0.00	0.14	0.00	0.00	0.00	0.02	4
337	8.69	1.67	0.10	0.18	0.95	0.92	0.84	0.60	4
340	3.60	0.47	W	1.71	0.48	0.48	0.32	0.24	4
343	9.40	0.28	W	0.47	0.36	0.24	0.28	0.20	4
349	12.98	0.16	0.00	0.00	0.00	0.06	0.04	0.06	4
350	40.08	0.87	W	0.16	0.36	0.24	0.24	0.14	4
352	4.00	0.05	0.00	1.03	0.00	0.00	0.00	0.01	4
361	0.02	0.02	0.00	0.00	0.17	0.00	0.00	1.20	4
365	14.56	0.27	W	0.02	0.36	0.24	0.24	0.12	4

YEAR:	TIME	INTERVAL	(MIN)	AND	AVG	INT	INTENSITIES	CURVE	FUSION	INDEX	(0.0- 4)
					MAXIMUM	RAINFALL	(IN/HR)				
1977	10	30	60	0.05	0.00	0.00	0.00	9.3	0	0	4
	15	30	60	0.10	0.05	0.05	0.05	9.4	0	0	4
	20	30	60	0.00	0.00	0.00	0.00	9.8	0	0	4
	25	30	60	0.00	0.00	0.00	0.00	9.8	0	0	4
	30	30	60	0.01	0.01	0.01	0.01	9.2	0	0	4
	35	30	60	0.01	0.01	0.01	0.01	9.2	0	0	4
	40	30	60	0.01	0.01	0.01	0.01	9.3	0	0	4
	45	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	50	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	55	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	60	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	65	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	70	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	75	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	80	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	85	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	90	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	95	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	100	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	105	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	110	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	115	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	120	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	125	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	130	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	135	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	140	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	145	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	150	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	155	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	160	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	165	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	170	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	175	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	180	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	185	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	190	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	195	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	200	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	205	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	210	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	215	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	220	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	225	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	230	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	235	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	240	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	245	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	250	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	255	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	260	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	265	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	270	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	275	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	280	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	285	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	290	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	295	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	300	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	305	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	310	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	315	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	320	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	325	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	330	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	335	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	340	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	345	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	350	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	355	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	360	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	365	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	370	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	375	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	380	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	385	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	390	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	395	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	400	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	405	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	410	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	415	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	420	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	425	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	430	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	435	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	440	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	445	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	450	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	455	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	460	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	465	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	470	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	475	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	480	30	60	0.02	0.02	0.02	0.02	9.8	0	0	4
	485	30	60	0.02	0.02	0.02	0.02	9.			

HAWAII SITE: KUNIA

YEAR: 1975

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	RAIN -RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			CURVE NO	EROSION INDEX	CROP CODE
					5	10	15			
11	9.06	1.48	0.26	17.	0.00	0.72	0.66	0.64	0.60	0.54
11	12.38	2.20	0.15	7.	1.48	2.16	2.04	1.76	1.20	0.62
24	1.50	0.02	0.00	0.	0.00	0.00	0.00	0.00	0.01	0.01
25	4.01	0.05	0.00	0.	0.02	0.00	0.00	0.00	0.00	0.01
30	16.89	0.66	0.00	0.	0.05	0.24	0.18	0.16	0.16	0.04
30	7.54	0.73	0.08	11.	0.66	0.36	0.30	0.28	0.26	0.23
31	19.89	4.11	0.40	10.	1.38	2.88	2.40	2.16	1.52	1.45
33	13.29	1.04	0.01	1.	5.49	2.16	2.04	1.69	1.12	0.63
40	2.79	0.31	0.00	0.	0.00	0.48	0.42	0.28	0.18	0.16
48	3.11	0.03	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.00
53	1.30	0.14	0.00	0.	0.03	0.24	0.18	0.16	0.08	0.07
58	0.41	0.04	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.00
61	0.92	0.03	0.00	0.	0.04	0.00	0.00	0.05	0.00	0.03
62	1.00	0.04	0.00	0.	0.06	0.00	0.00	0.00	0.02	0.02
70	13.37	0.26	0.00	0.	0.00	0.24	0.24	0.24	0.12	0.06
75	2.26	0.06	0.00	0.	0.00	0.00	0.00	0.00	0.03	0.03
76	0.83	0.02	0.00	0.	0.06	0.00	0.00	0.00	0.00	0.04
77	2.18	0.04	0.00	0.	0.08	0.00	0.00	0.00	0.01	0.02
86	2.43	0.08	0.00	0.	0.00	0.00	0.00	0.00	0.06	0.03
87	19.24	1.79	0.13	7.	0.08	0.84	0.84	0.69	0.48	0.42
90	6.79	0.22	0.03	11.	1.87	0.36	0.24	0.16	0.12	0.07
92	1.02	0.03	0.00	0.	0.21	0.00	0.06	0.04	0.02	0.01
93	1.01	0.05	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.05
94	1.08	0.02	0.00	0.	0.30	0.00	0.00	0.00	0.00	0.02
95	2.84	0.09	0.00	0.	0.33	0.00	0.00	0.00	0.08	0.03
97	4.22	0.25	0.02	4.	0.20	0.60	0.42	0.36	0.26	0.19
98	6.18	0.30	0.03	9.	0.42	0.36	0.36	0.32	0.28	0.21
102	0.38	0.03	0.00	0.	0.55	0.00	0.00	0.00	0.00	0.08
107	10.76	0.06	0.00	0.	0.03	0.00	0.00	0.00	0.00	0.01
107	1.94	0.04	0.00	0.	0.06	0.00	0.00	0.00	0.02	0.02
109	0.66	0.03	0.00	0.	0.09	0.00	0.00	0.00	0.00	0.05
110	2.65	0.05	0.00	0.	0.13	0.00	0.00	0.00	0.00	0.02
114	1.42	0.02	0.00	0.	0.07	0.04	0.00	0.00	0.00	0.03
123	0.92	0.03	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.06
125	4.10	0.06	0.00	0.	0.03	0.00	0.00	0.00	0.02	0.02
127	1.09	0.04	0.00	0.	0.09	0.00	0.00	0.00	0.00	0.01
135	0.76	0.05	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.05
138	2.64	0.14	0.00	0.	0.05	0.26	0.24	0.20	0.16	0.11

HAWAII SITE: KONIA

YEAR: 1975

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)						CURVE NO.	FUSION INDEX	DATE
					5	10	15	30	60	Avg INT			
138	0.84	0.02	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.03	99	0	4
141	1.26	0.07	0.00	0.16	0.00	0.00	0.08	0.04	0.04	0.06	96	0	4
142	1.25	0.04	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.03	93	0	4
159	3.14	0.05	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.02	93	0	4
162	9.19	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.01	93	0	4
163	2.80	0.04	0.00	0.09	0.00	0.00	0.04	0.02	0.01	0.02	93	0	4
175	3.18	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	93	0	4
177	0.05	0.03	0.00	0.04	0.18	0.00	0.00	0.00	0.00	0.50	99	0	4
178	6.32	0.07	0.00	0.06	0.12	0.06	0.08	0.04	0.02	0.01	97	0	4
192	8.58	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99	0	4
199	19.65	0.21	0.00	0.00	0.12	0.06	0.08	0.06	0.04	0.01	91	0	4
201	2.21	0.22	0.00	0.21	0.36	0.18	0.12	0.10	0.12	0.19	90	0	4
250	5.23	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	93	0	4
259	5.11	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93	0	4
279	1.15	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	93	0	4
279	12.20	0.44	0.00	0.03	0.48	0.42	0.28	0.28	0.23	0.04	82	0	4
284	0.60	0.05	0.00	0.47	0.12	0.00	0.04	0.04	0.04	0.09	97	0	4
291	14.24	0.05	0.00	0.00	0.12	0.06	0.04	0.02	0.01	0.00	93	0	4
298	8.77	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99	0	4
311	3.55	0.08	0.00	0.00	0.12	0.06	0.04	0.04	0.02	0.02	96	0	4
312	3.84	0.03	0.00	0.08	0.12	0.12	0.08	0.04	0.03	0.02	96	0	4
323	0.06	0.03	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.53	98	0	4
324	0.06	0.02	0.00	0.03	0.17	0.00	0.00	0.00	0.00	0.40	99	0	4
326	3.22	0.04	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.01	98	0	4
327	26.49	2.44	0.55	23	0.09	2.52	2.04	1.80	1.08	0.61	10	73	23
328	22.57	5.17	0.78	15	2.53	3.36	2.79	2.40	1.76	1.28	50	81	4
331	10.56	0.18	0.00	0.18	7.64	0.48	0.24	0.20	0.16	0.08	92	0	4
335	2.54	0.04	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.02	93	0	4
342	4.77	0.18	0.00	0.00	0.00	0.48	0.24	0.16	0.10	0.05	92	0	4
344	1.06	0.04	0.00	0.18	0.00	0.00	0.00	0.00	0.01	0.04	98	0	4
346	26.79	0.40	0.00	0.22	0.12	0.12	0.12	0.10	0.08	0.01	83	0	4

HAWAII SITE: KUNIA

YEAR: 1976

STORM DAY	JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	ANT. MOISTURE (IN)	TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)			CURVE FUSION GROUP CODE
						5	10	15	
2	6.37	0.14	0.00	0.00	0.24	0.12	0.08	0.04	0.02
6	4.06	0.21	0.03	0.15	0.14	0.60	0.48	0.32	0.07
20	5.33	0.11	0.01	0.10	0.00	0.24	0.12	0.10	0.07
29	9.20	0.29	0.01	0.5	0.00	0.84	0.72	0.52	0.03
30	29.11	1.49	0.37	25.	0.29	3.72	2.88	2.32	1.20
36	20.72	1.92	0.41	21.	0.00	2.16	2.10	1.76	1.32
37	20.67	3.12	0.66	21.	1.92	4.08	2.04	1.88	1.22
38	30.71	5.97	1.30	22.	5.04	3.00	2.94	2.60	1.76
40	3.77	0.07	0.01	20.	11.01	0.36	0.30	0.20	0.10
41	0.31	0.04	0.00	0.	11.08	0.00	0.00	0.00	0.00
44	0.25	0.03	0.00	0.	0.11	0.08	0.06	0.06	0.00
45	13.46	0.05	0.00	0.	0.13	0.00	0.00	0.00	0.00
46	9.09	0.03	0.00	0.	0.11	0.00	0.00	0.00	0.00
47	3.00	0.05	0.00	0.	0.11	0.24	0.12	0.08	0.06
47	1.76	0.03	0.00	0.	0.15	0.00	0.00	0.00	0.01
52	7.41	0.12	0.00	0.	0.07	0.12	0.12	0.10	0.06
58	4.53	0.15	0.01	3.	0.12	0.36	0.30	0.28	0.18
61	9.31	0.85	0.10	12.	0.15	1.08	0.90	0.72	0.66
65	0.14	0.03	0.00	0.	0.85	0.00	0.00	0.00	0.01
68	7.49	0.05	0.00	0.	0.03	0.13	0.00	0.00	0.00
77	26.54	1.18	0.35	30.	0.00	0.84	0.78	0.68	0.38
81	0.18	0.03	0.00	0.	1.18	0.00	0.07	0.00	0.00
82	0.05	0.03	0.00	0.	1.21	0.18	0.00	0.00	0.18
83	3.23	0.11	0.00	0.	0.06	0.12	0.12	0.12	0.06
85	1.47	0.04	0.00	0.	0.16	0.00	0.00	0.04	0.06
86	0.52	0.03	0.00	0.	0.21	0.00	0.00	0.00	0.00
89	10.81	0.12	0.01	5.	0.07	0.48	0.30	0.20	0.12
93	23.82	0.51	0.11	21.	0.12	0.72	0.48	0.44	0.24
94	7.72	0.05	0.00	0.	0.63	0.00	0.00	0.00	0.02
97	17.56	0.11	0.01	10.	0.56	0.24	0.12	0.12	0.08
99	17.58	0.13	0.01	4.	0.16	0.12	0.12	0.08	0.04
107	3.78	0.28	0.03	9.	0.00	0.36	0.30	0.24	0.14
108	21.98	0.17	0.02	14.	0.28	0.36	0.24	0.16	0.07
111	0.94	0.02	0.00	0.	0.45	0.00	0.00	0.00	0.00
112	9.35	0.06	0.01	18.	0.47	0.13	0.06	0.04	0.02
113	27.34	0.19	0.01	6.	0.25	0.36	0.18	0.12	0.08
118	21.23	0.27	0.03	11.	0.19	0.36	0.30	0.32	0.28
120	1.82	0.08	0.01	6.	0.27	0.18	0.12	0.10	0.06

HAWAII SITE: KUNIA

YEAR: 1976

JULIAN DAY	STORM LENGTH (HRS)	RAIN --RUNOFF--		ANT MOISTURE		TIME INTERVAL (MIN) AND MAXIMUM RAINFALL INTENSITIES (IN/HR)		AVG INT		CURVE FRACTION (%/HR)	
		(IN)	(%)	(IN)	(%)	5	10	15	30	60	NO INDEX
125	0.39	0.02	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.06	0.4
132	0.55	0.03	0.00	0.00	0.00	0.04	0.04	0.02	0.00	0.06	0.4
133	10.07	0.05	0.00	0.03	0.00	0.00	0.00	0.01	0.01	0.01	0.4
136	5.26	0.05	0.00	0.08	0.12	0.04	0.04	0.04	0.02	0.01	0.4
139	0.47	0.03	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.06	0.4
140	3.80	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.4
141	24.40	0.08	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.4
155	0.79	0.06	0.00	0.00	0.00	0.24	0.12	0.16	0.08	0.00	0.08
156	0.50	0.03	0.00	0.06	0.00	0.00	0.00	0.00	0.04	0.00	0.06
169	23.32	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.05	0.03	0.00	0.09	0.29	0.00	0.00	0.00	0.00	0.00	0.48
176	0.03	0.05	0.00	0.03	0.03	0.18	0.00	0.00	0.00	0.00	0.50
183	7.15	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4
184	5.56	0.05	0.00	0.03	0.12	0.06	0.04	0.02	0.01	0.00	0.4
193	18.35	0.04	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.02	0.4
198	5.07	0.03	0.00	0.06	0.06	0.00	0.00	0.00	0.00	0.01	0.4
201	4.47	0.05	0.00	0.03	0.03	0.12	0.04	0.04	0.02	0.01	0.4
201	8.13	0.24	0.00	0.1	0.08	0.36	0.36	0.32	0.22	0.13	0.4
203	0.33	0.03	0.00	0.00	0.32	0.14	0.00	0.04	0.00	0.00	0.4
204	3.13	0.07	0.00	0.00	0.33	0.00	0.06	0.04	0.02	0.04	0.4
205	0.21	0.02	0.00	0.2	0.40	0.00	0.00	0.00	0.00	0.00	0.4
207	3.90	0.15	0.00	0.2	0.13	0.48	0.36	0.28	0.18	0.12	0.4
208	7.86	0.08	0.00	0.00	0.28	0.00	0.00	0.00	0.02	0.02	0.4
224	11.73	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.4
226	4.00	0.03	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.4
231	0.45	0.05	0.00	0.03	0.24	0.12	0.12	0.08	0.08	0.04	0.4
232	4.57	0.24	0.01	0.05	0.05	0.72	0.42	0.28	0.14	0.10	0.4
238	8.44	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.14	0.4
247	0.28	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.4
253	2.76	0.07	0.00	0.00	0.00	0.12	0.12	0.08	0.08	0.03	0.4
255	16.65	0.07	0.00	0.07	0.00	0.00	0.00	0.02	0.01	0.00	0.4
268	0.84	0.13	0.00	0.00	0.13	0.00	0.36	0.12	0.08	0.15	0.4
272	7.03	0.04	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.01	0.4
273	12.55	0.11	0.00	0.00	0.17	0.36	0.30	0.00	0.00	0.00	0.4
278	1.45	0.15	0.00	1	0.11	0.36	0.30	0.28	0.24	0.13	0.4
286	9.73	0.08	0.00	0.00	0.12	0.04	0.04	0.06	0.03	0.00	0.4
287	27.42	0.08	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.4
307	1.42	0.04	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.03	0.4

HAWAII SITE: KUNIA

YEAR: 1976

JULIAN DAY	STORM LENGTH (HRS)	RAIN		--RUNOFF--		MOISTURE		MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN) AND INTENSITIES	AVG	DUR OF FUSION NO	FUSION CODE
		(IN)	(IN)	(%)	(IN)	(IN)	(IN)					
310	27.74	0.07	0.00	0.	0.04	0.11	0.00	0.00	0.00	0.00	96	4
320	6.59	0.07	0.00	0.	0.00	0.12	0.06	0.04	0.03	0.01	96	4
329	15.57	0.28	0.00	1.	0.00	0.36	0.30	0.28	0.22	0.02	90	4
331	4.98	0.72	0.04	6.	0.28	0.84	0.78	0.64	0.36	0.31	83	1
342	1.37	0.03	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.02	79	0
348	12.55	0.31	0.01	2.	0.00	0.48	0.44	0.26	0.14	0.02	90	4
361	10.90	0.06	0.00	0.	0.00	0.24	0.12	0.08	0.04	0.01	97	0

HAWAII SITE: KONAIA

YEAR: 197?

STORM DAY	JULIAN LENGTH (HRS)	RAIN		--RUNOFF--		ANT. MOISTURE (IN)	TIME INTERVAL (MIN)	RAINFALL (IN/Hr)	INTENSITIES AVG	INTENSITIES MAXIMUM	INTENSITIES MINIMUM	INTENSITIES LAST
		(IN)	(%)	(IN)	(%)							
1	3.49	0.05	0.00	0	0.00	0.00	5	0.00	0.00	0.00	0.00	0.00
8	4.88	0.04	0.00	0	0.00	0.00	10	0.00	0.00	0.00	0.00	0.00
11	3.87	0.17	0.00	1	0.04	0.24	30	0.20	0.12	0.08	0.04	0.00
20	0.69	0.13	0.00	1	0.00	0.48	40	0.40	0.24	0.00	0.00	0.00
27	2.84	0.33	0.01	2	0.00	0.48	42	0.40	0.32	0.13	0.13	0.00
31	1.41	0.05	0.00	0	0.33	0.07	60	0.00	0.00	0.01	0.04	0.00
32	1.92	0.14	0.00	0	0.38	0.24	70	0.24	0.18	0.10	0.07	0.00
37	6.04	0.04	0.00	0	0.14	0.00	90	0.00	0.00	0.00	0.01	0.00
54	11.54	0.07	0.00	0	0.00	0.09	10	0.00	0.00	0.02	0.01	0.00
56	5.46	0.03	0.00	0	0.07	0.16	15	0.00	0.00	0.01	0.01	0.00
59	19.63	0.15	0.00	0	0.11	0.24	30	0.24	0.12	0.08	0.04	0.00
62	3.74	0.06	0.00	0	0.15	0.12	40	0.06	0.04	0.02	0.02	0.00
63	24.12	0.15	0.00	0	0.22	0.12	60	0.02	0.04	0.02	0.02	0.00
65	3.58	0.07	0.00	0	0.22	0.24	10	0.12	0.08	0.04	0.03	0.00
67	17.05	0.09	0.00	0	0.30	0.00	30	0.00	0.00	0.01	0.01	0.00
68	1.83	0.03	0.00	0	0.32	0.00	60	0.00	0.00	0.02	0.02	0.00
70	3.28	0.04	0.00	0	0.20	0.00	10	0.00	0.00	0.02	0.01	0.00
71	12.53	0.12	0.00	0	0.16	0.24	15	0.18	0.16	0.08	0.05	0.00
72	12.56	0.15	0.00	1	0.28	0.94	40	0.42	0.28	0.14	0.08	0.01
76	4.15	0.05	0.00	0	0.27	0.12	60	0.06	0.04	0.02	0.03	0.01
81	2.79	0.05	0.00	0	0.05	0.00	10	0.00	0.00	0.02	0.01	0.00
86	23.34	0.53	0.00	0	0.05	0.60	30	0.30	0.40	0.24	0.13	0.02
88	8.86	0.11	0.00	0	0.53	0.12	60	0.06	0.04	0.02	0.02	0.01
89	12.75	0.51	0.17	34	0.63	1.08	90	0.60	0.34	0.22	0.06	0.00
91	8.12	0.45	0.16	36	1.14	0.72	60	0.66	0.34	0.20	0.08	0.00
97	2.98	0.06	0.00	0	0.00	0.00	10	0.00	0.00	0.02	0.02	0.00
105	7.68	0.09	0.00	0	0.00	0.04	30	0.04	0.04	0.04	0.04	0.00
125	32.06	0.23	0.03	11	0.00	0.34	10	0.18	0.16	0.10	0.00	0.00
129	5.90	0.06	0.00	0	0.23	0.24	15	0.18	0.12	0.06	0.03	0.01
130	11.84	0.45	0.03	7	0.29	0.96	90	0.80	0.58	0.38	0.25	0.00
130	7.83	0.70	0.05	7	0.51	1.44	120	1.04	0.82	0.56	0.39	0.04
131	10.51	0.41	0.05	13	1.21	0.72	60	0.66	0.48	0.24	0.15	0.04
132	6.25	0.33	0.06	19	1.62	0.72	60	0.60	0.48	0.38	0.25	0.12
132	7.83	0.85	0.14	16	1.95	3.84	80	2.82	2.16	1.22	0.62	0.18
133	11.61	0.31	0.02	7	2.80	0.96	72	0.52	0.48	0.25	0.04	0.00
134	4.42	0.15	0.03	21	3.11	0.24	120	0.16	0.12	0.07	0.10	0.00
134	2.32	0.07	0.01	17	3.20	0.24	120	0.12	0.07	0.04	0.04	0.00
146	5.30	0.07	0.03	37	0.00	0.24	120	0.12	0.08	0.04	0.04	0.00

HAWAII SITE: KUNIA

YEAR: 1977

STORM JULIAN DAY	LENGTH (HRS)	RAIN (IN)	--RUNOFF-- (IN)	MOISTURE (IN)	MAXIMUM RAINFALL (IN/HR)	TIME INTERVAL (MIN)	INTENSITIES	AVG INT	CLIMATE	EROSION GROUP INDEX CODE	
147	12.81	0.06	0.05	74.	0.07	0.12	0.06	0.04	0.02	0.01	100
156	7.91	0.46	0.04	10.	0.00	0.72	0.66	0.64	0.52	0.34	0.08
158	5.86	0.09	0.02	24.	0.46	0.36	0.24	0.20	0.16	0.08	0.05
178	5.52	0.58	0.01	2.	0.00	0.72	0.72	0.72	0.52	0.28	0.11
179	5.37	1.37	0.14	10.	0.53	2.04	1.92	1.83	1.42	0.91	0.63
209	4.16	0.16	0.02	10.	0.00	0.24	0.24	0.24	0.20	0.13	0.06
217	0.81	0.04	0.00	0.	0.00	0.12	0.06	0.04	0.02	0.01	0.05
224	0.90	0.04	0.00	0.	0.00	0.12	0.06	0.04	0.02	0.01	0.05
237	1.22	0.03	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.00	0.05
267	2.23	0.03	0.00	0.	0.00	0.00	0.00	0.00	0.00	0.00	0.02
283	4.70	0.14	0.05	30.	0.00	0.84	0.72	0.64	0.32	0.16	0.48
298	7.58	0.31	0.02	5.	0.00	0.48	0.42	0.32	0.26	0.16	0.04
306	2.66	0.12	0.02	17.	0.00	0.72	0.48	0.32	0.16	0.08	0.74
328	0.77	0.19	0.00	2.	0.00	0.60	0.48	0.44	0.26	0.09	0.24
334	7.97	0.11	0.00	0.	0.00	0.24	0.18	0.12	0.06	0.03	0.01
337	0.86	0.07	0.00	0.	0.11	0.24	0.12	0.12	0.08	0.00	0.08
337	8.31	2.08	0.21	10.	0.19	0.84	0.78	0.76	0.72	0.64	0.29
341	16.47	0.76	0.11	15.	2.15	1.08	0.78	0.68	0.50	0.39	0.06
351	24.70	0.33	0.00	0.	0.00	0.12	0.06	0.08	0.06	0.04	0.01
361	6.78	0.13	0.00	1.	0.00	0.60	0.42	0.28	0.20	0.02	0.02
365	3.80	0.28	0.02	5.	0.13	0.36	0.30	0.28	0.22	0.19	0.07
365	3.07	0.10	0.00	0.	0.41	0.24	0.18	0.12	0.06	0.04	0.03

Table 5.--Sediment loss logs for the period beginning December 1972

Site Watershed	Period in months		Total losses	Average loss		Average annual EI30	Average loss $EIx10^2$
	Ending	Tons/ acre		Metric tons/ ha/yr	Tons/ acre/ yr		
1. Laupahoehoe	60	Dec. 1977	2.69	1.2	0.54	739	0.076
2. Honokaa	60	Dec. 1977	.76	.34	.15	166	.096
3. Waialua sugar (A)	53	June 1977	8.40	4.26	1.90	139	1.44
4. Waialua pineapple (B)	53	May 1977	14.10	7.16	3.19	276	1.22
5. Mililani	44	July 1977	13.34	8.15	3.64	268	1.43
6. Kunia	38	Dec. 1977	14.37	10.17	4.54	180	2.65

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